COUNTWAY LIBRARY
HC 4DAM Z

BOSTON
MEDICAL LIBRARY
8 THE FENWAY

MEDICAL RECORD

BOSTON
FEB 25 1948
MEDICAL LIBRARY

The laws of the lawgiver are impotent beside the laws of human nature as, to his disillusion, many a lawgiver has discovered.

—Allbutt

JANUARY 1948

Vol. 161, No. 1

32178

the characteristic response to Pyridium therapy

The prompt symptomatic relief provided by Pyridium is extremely gratifying to the patient suffering from distressing urinary symptoms such as painful, urgent, and frequent urination, nocturia, and tenesmus.

Pyridium, administered orally in a dosage of 2 tablets *t.i.d.*, will promptly relieve these symptoms in a large percentage of ambulant patients, thereby permitting them to pursue normal activities without undue discomfort.

Acting directly on the mucosa of the urogenital tract, this important effect of Pyridium is entirely local. It is not associated with or due to systemic sedation or narcotic action.

Therapeutic doses of Pyridium may be administered with virtually complete safety throughout the course of cystitis, pyelonephritis, prostatitis, and urethritis. • LITERATURE ON REQUEST •

REG. U. S. **PYRIDIUM** PAT. OFF.

(Phenylazo-alpha-alpha-diamino-pyridine mono-hydrochloride)

MERCK & CO., Inc. RAHWAY, N. J.

Manufacturing Chemists

In Canada: MERCK & CO., Ltd., Montreal, Que.

PYRIDIUM is the United States Registered Trade-Mark of the product manufactured by the Pyridium Corporation. Merck & Co., Inc., Sole Distributors.

in the endocrine ensemble

In the endocrine ensemble, the corpus luteum hormone is instrumental in stimulating progestational development of the endometrium, inhibiting abnormal uterine motility and fostering normal estrogen metabolism. When deficiency evokes the discords —habitual abortion, dysmenorrhea, premenstrual tension, meno-metrorrhagia —harmony may be restored with

PRANONE

SCHERING'S ORALLY EFFECTIVE
ANHYDROHYDROXY-PROGESTERONE

DOSAGE:

Habitual Abortion — PRANONE* Tablets 10 to 25 mg. daily, increasing to 30 to 75 mg. during periods of "calculated menses" or stress; treatment should be continued into the sixth month of pregnancy.

Dysmenorrhea — PRANONE 5 to 10 mg. once to three times daily for eight to ten days preceding onset of expected menses.

Premenstrual Tension — PRANONE 10 mg. once or twice daily beginning 10 to 14 days before menses.

Meno-metrorrhagia — PRANONE 10 mg. two to three times daily during the last half of the menstrual cycle, repeating the dosage during several successive cycles.

For parenteral corpus luteum therapy PROLUTON* — progesterone in oil — is available.

PACKAGING: PRANONE Tablets of 5, 10, and 25 mg., in boxes of 20, 40, 100 and 250 tablets. PROLUTON in ampuls of 1, 2, 5 and 10 mg., in boxes of 3, 6 and 50 ampuls; multiple dose vials of 10 cc. containing 25 mg. per cc.

*®

PRANONE

Schering

CORPORATION • BLOOMFIELD, NEW JERSEY
IN CANADA, SCHERING CORPORATION LTD., MONTREAL

in weight reduction— new evidence of the efficacy of Dexedrine

Excerpts from a recent study entitled, THE MECHANISM OF AMPHETAMINE-INDUCED LOSS OF WEIGHT: A Consideration of the Theory of Hunger and Appetite —by Harris, S. C.; Ivy, A. C., and Searle, L. M.: J. A. M. A. 134:1468 (Aug. 23) 1947.

experiment 1. Does 'Dexedrine' Sulfate, by controlling appetite, decrease food intake and body weight in human subjects?

results ". . . our obese subjects lost weight when placed on a diet which allowed them to eat all they wanted three times a day . . ."

experiment 4. Does the rather prolonged administration of Dexedrine cause any evidence of disturbance of tissue functions?

results "No evidence of toxicity of the drug as employed in these studies was found . . . no evidence of deleterious effects of the drug was observed."

Dexedrine* Sulfate

(*dextro-amphetamine sulfate, S.K.F.*) Tablets Elixir

for control of appetite in weight reduction

* T.M. REG. U.S. PAT. OFF.

Smith, Kline & French Laboratories, Philadelphia

MEDICAL RECORD

FORMERLY KNOWN AS THE MEDICAL JOURNAL AND RECORD

PUBLISHED MONTHLY BY

THE MEDICAL JOURNAL AND RECORD PUBLISHING CO. INC.

JANUARY, 1948

OPEN FORUM 6

EDITORIALS 39

PAPERS AND ADDRESSES

Streptomycin:—Its Vital Importance in Intra-Abdominal Surgery
Donald C. Collins, M. D., F. A. C. S., F. I. C. S., Hollywood, Calif. 19

Poupartitis
N. B. Jaffe, M. D., Leavenworth, Kans. 22

A Review of 1500 Obstetric Cases
Edmund Lissack, B. Sc., M. D., Concordia, Mo. 25

Some Recent Concepts in the Chemotherapy of Malignancies
Alfred A. Messer, M. D., New York, N. Y. 28

Wine: Its Use in Health and Disease
Charles Pierre Mathe, M. D., F. A. C. S., San Francisco, Calif. 32

SPECIAL ARTICLES

Letter from Britain
(From Our Own Correspondent) 49

Gifts of the Americas
T. Swann Harding, Falls Church, Va. 6

Dr. Isidore William Held
Solomon R. Kagan, M. D., Roxbury, Mass. 46

SURGICAL DIGEST
Richard A. Leonardo, M. D., Rochester, N. Y. 53

NEWS ITEMS 43

BOOK REVIEWS 50

CRITIQUE 14

MEDICOLEGAL NOTES 54

NEW PRODUCTS 62

Notice of undeliverable copies and correspondence should be addressed to the Executive Office.

VOL. 161, No. 1
WHOLE No. 2780

Entered as Second Class matter at the Post Office at Kutztown, Pa., under the Act of March 3, 1879. Office of Publication, 307 Main Street, Kutztown, Pa. Editorial and Executive Offices, 215 Fourth Avenue, New York 3, N.Y.

SINGLE COPIES.....FORTY CENTS
DOMESTIC YEARLY SUBSCRIPTIONS.....$4.00
FOREIGN YEARLY SUBSCRIPTIONS.....$4.75

Copyright, 1948, by The Medical Journal and Record Publishing Company, Inc.

NOW

An amino acid product your patients will like to take

Vipeptolac
PROTEIN HYDROLYSATE COMPOUND
Wyeth
milk protein with lactalbumin, carbohydrate, vitamins, iron and saccharin (nonnutritive artificial sweetener), chocolate flavored
WYETH INCORPORATED • PHILADELPHIA, PA.

VIPEPTOLAC—A delicious chocolate-flavored protein food supplement. Vipeptolac combines amino acids, essential vitamins, iron and folic acid—*and it tastes good.* Mixed with milk or other liquids, Vipeptolac makes a delicious drink.

EACH 100 GRAMS OF VIPEPTOLAC PROVIDES:

Protein, polypeptides and amino acids (alanine, arginine, aspartic acid, cystine, glutamic acid, glycine, histidine, hydroxyproline, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, threonine, tryptophane, tyrosine and valine)		50 Gm.
Total nitrogen	7 %	
Amino acid and polypeptide nitrogen	3.6%	
Carbohydrate		37 Gm.
Fat		2 Gm.
Ash		9 Gm.
Calcium	1.2%	
Phosphorus	1 %	
Sodium	0.35%	
Moisture		2 Gm.
Vitamin A		8000 U.S.P. units
Vitamin D		800 U.S.P. units
Thiamine Hydrochloride		6 mg.
Riboflavin		12 mg.
Niacinamide		60 mg.
Ascorbic Acid		60 mg.
Folic Acid		2 mg.
Iron (as ferrous sulfate)		25 mg.

VIPEPTOLAC®

Protein Hydrolysate Compound

WYETH INCORPORATED Wyeth® PHILADELPHIA 3, PA.

Cholera Under Control in Egypt

The cholera epidemic prevalent in Egypt recently came to a halt the latter part of November through the World Health Organization's assistance to the Egyptian Public Health Authorities. This demonstration showed remarkable cooperation among nations in combatting a danger which consequently remained isolated in Egypt and which was brought under control within six weeks.

Medical history shows that this is the first time that an epidemic of such magnitude, which spread at the rate of more than a thousand new cases a day, had been checked in so short a time.

The concentrated campaign was carried on by the following procedure: the WHO headquarters office in New York shipped by air more than 32 tons of vaccine, blood plasma and other supplies urgently needed for the treatment and prevention of cholera. The Geneva technical office began tests on the Egyptian cholera vibrio and distributed samples of this strain to specialized laboratories in six countries. The Expert Committee on Quarantine consulted on the possibility of standardizing cholera vaccine.

Through the efforts of the WHO Headquarters Office more than 5,000,000 cubic centimeters of cholera vaccine was shipped to Egypt and her neighbors. United States drug manufacturers supplied approximately 3,000,000 cc. from new production started to meet any emergency. China made available 2,000,000 cc. of vaccine to Egypt, and more than 3,200,000 cc. were offered by Indo-China, Japan and Southern Korea.

Final figures through mid-November, when the epidemic was declining sharply, show a total of 20,127 cases with 9,760 deaths. Thus the case fatality rate was about 48.5 percent, as compared to an apparent fatality rate of 85 percent in 1902.

One of the main reasons for this comparatively low mortality rate is due to the fact that the current epidemic never gained a foothold in the cities, where the water supply is protected, and had been confined almost entirely to the Nile Delta.

Further releases from WHO report that their fellowships have been granted to 190 physicians, nurses and public health specialists during the first 11 months of the 1947 fellowship program. Ninety-nine awards have been made for study in the United States and Canada, and 91 for work in Europe, Great Britain and the U. S. S. R.

The organization intends to spread through the presentation of fellowships, medical knowledge to the widest possible extent and to aid in rehabilitating public health in the countries most ravaged by war. Fellows are nominated by their governments and follow a plan of study approved jointly by the national government and WHO.

Bromsulphalein Sodium

BROMSULPHALEIN SODIUM SOLUTION* is used as a test of liver function, especially in suspected cases of cirrhosis, malignancy, hepatitis, obstructive and arsenical jaundice. Normally the dye is removed rapidly from the blood stream by the liver, but in the presence of hepatic disease it is eliminated more slowly. The test is performed by injecting intravenously a test dose, after which the amount of dye retained in the blood is estimated colorimetrically by withdrawing a specimen of blood for comparison with a set of standards.

BROMSULPHALEIN SODIUM is supplied in 3 cc. size ampules containing a 5% sterile aqueous solution, packaged in boxes of 10. Colorimeter standards prepared from permanent dyes are also available.

Complete literature on request.

**H.W. & D. Brand of Sulfobromophthalein-sodium, U. S. P.*

HYNSON, WESTCOTT & DUNNING, INC.
BALTIMORE 1, MARYLAND
H W D

Open Forum

GIFTS OF THE AMERICAS

T. SWANN HARDING
Falls Church, Va.

It is commonly known that quinine is a gift of the Americas to the medical and pharmaceutical worlds. The story of its discovery, adoption, and first utilization is often erroneously told, but this specific from the bark of the cinchona tree is a native of South America, where the Indians of the Loja region were already using it as medicine when the Spanish arrived.

Its first use in the recurrent fevers caused by protozoan parasites, genus *Plasmodium,* and referred to as malaria, may well have been accidental. The history of its discovery and first use is obscured by legend. Its first recorded use actually was in curing a European at Lalacatos, Ecuador, in 1630, and it soon became an invaluable American export.

The stimulus its discovery afforded organic chemistry was in a sense incidental because commerce in a product so valuable led to the development of improved analytical methods long, long before modern genius synthesized the drug. Aniline dyes and other important articles of commerce were discovered along the route littered with syntheses which went wrong and the foundations of modern organic chemistry were placed by this drug.

Other alkaloids were found in cinchona bark, some of them with antimalarial properties. One of them, quinidine, was found to remedy certain cardiac troubles and many elderly people still depend on it for their lives. The cinchona trees are found principally in temperate and subtropical areas of South America. They are native to that continent, though they now grow in the Tropics elsewhere in the world.

As the bark became scarcer, prices rose, and more remote regions were penetrated to get the bark, the trees first having been exploited or mined heedlessly. Ultimately plantation production of quinine was promoted in the Tropics generally, especially in India and the East Indies. In time, use of the Javan plantation product practically supplanted the wild product of this Hemisphere, but the American industry was revived when the Japs captured Java.

Fortunately the cinchona tree is not easily killed. Sprouts of trees harvested in the last century provided a basis for boom of the industry and in 2½ years about 18,000 tons of the bark were again harvested in Colombia, Ecuador, Peru, and Bolivia. Meanwhile atabrine and other products were perfected as substitutes in treating malaria and in some cases supplanted quinine.

Sarsaparilla is another gift of the Americas, a drug which had a great reputation, then fell into disrepute and disuse, and today has won new interest endocrinologically. It also is a native of the Americas, which was introduced in Europe about 1536, where it was widely used in the treatment of syphilis, though its popularity rather naturally waned.

It is obtained from the dried roots of several species of Smilax which grow in Jamaica, Mexico, Central America, and the warmer areas of South America.

While complete identification of many commercially acceptable species of smilax has not yet been made, the drug has always found some use. A hundred or more years ago it was regarded as effective in scrofula and chronic rheumatism, as well as in certain skin diseases and in syphilis, but it won medical disfavor and, except as a vehicle for the administration of other drugs, almost went out of use. Today some consider it valuable for increasing the absorption of other drugs from the intestinal tract, though it is still used as a pharmaceutical vehicle and also, of course, for flavoring beverages.

Roots of the sarsaparilla plants may be harvested annually, beginning 2 or 3 years after planting. Only the larger roots are cut. The shrubs are hardy and soon develop new roots. The dried roots are boiled in water or in alcohol to extract the drug, while the roots also yield three saponins, paroaparic acid, and resin. In India, Australia, Italy, and elsewhere other plants altogether are used to produce what is called sarsaparilla, but the drug continues lurching on in its topsy-turvy career.

Papaya, which produces the digestive enzyme papain, is also a native of this Hemisphere. The papaya spread rapidly after its discovery and, as early as 1598, was reported to have been carried to the far shores of India and Malacca, while it entered Hawaii between 1800 and 1823. At present the fruit is cultivated in most tropical countries and few trees grow so rapidly and yield so heavily, but the life of the plant is but from 3 to 4 years. The plants have a single stem from 15 to 25 feet in height and 10 to 30 fruits grow near the top of each.

In the Tropics the papaya is an important article of diet, esteemed as a breakfast or dessert fruit. Many years ago natives of the West Indies also began to tenderize their meat with its juice. Furthermore natives of the Americas commonly gorged themselves with huge quantities of meat, even if spoiled, when available, but a generous portion of papaya generally enabled them to escape acute indigestion.

Today the most essential use of papain in this country is in preparations for the relief of digestive ills. In 1945 we imported 315,000 pounds of the drug, 74 percent of which came from British East Africa. But several commercial products are made from papayas which rank high in vitamins A and C and are a welcome addition to any meal.

Turning from drugs to cosmetics there is Brazilian *bois de rose oil,* a mere youth in the essential oils family which had its beginnings in prehistoric Egypt. The oil is obtained from the wood of a

IMPROVED THYROID MEDICATION

Thyrobrom®

now available in

New Dosage Forms
New Package Sizes
New Lower Prices

THYROBROM—Van Patten—is brominated thyroid in which the bromine enters into *chemical combination** with selected, defatted thyroid.

THYROBROM is a stable, glandular product giving reliable, thyroid response —with a minimum of thyrotoxic effects.

THYROBROM is indicated in conditions of thyroid deficiency and has been found highly effective in raising the BMR.

THYROBROM iodine content is 0.2%—same as U.S.P.

Up to now THYROBROM has been available in but one dosage form—2 gr. tablets. However, with the steadily increasing demand for THYROBROM, has come a collateral demand for two new dosage forms—1 gr. tablets and ½ gr. tablets.

And so we're pleased to announce that these two new dosage forms are now available in addition to the original 2 gr. tablets. In short, THYROBROM is now to be had in three dosage forms as follows:

Bottles of 100, 500, 1000 tablets (½ gr.
grooved for easy administration (1 gr.
U. S. P. iodine content -- 0.2%. (2 gr.

THYROBROM IS LIMITED STRICTLY TO PRESCRIPTION USE

Because of the greatly increased demand for THYROBROM and the new package sizes here listed, THYROBROM is now available at considerably lower prices than before.
For professional samples and covering literature, sign and mail the coupon.

*U. S. Patent No. 2395372.

Van Patten Pharmaceutical Company
1227 Loyola, Chicago 26. MR-1

Please send professional samples of THYROBROM and literature.

Dr. _____

Address _____

Town _____ State _____

South American tree related to the rosewoods of French Guiana and growing wild on the Amazon. The logs are transported to distilleries by water but cannot be floated as the wood is heavier than water.

Producing oil from the rosewood tree is now strictly regulated to prevent despoliation. Government inspectors oversee processing in distilleries, where the logs are reduced to chips and distilled, the yield averaging one percent and the wood thereafter being used for fuel. The oil is prized for its linaloöl content, which makes it similar to Mexican linaloe oil, and it is used in making fragrant soaps, cosmetics, and perfumes, also as a food and beverage flavor. Annual production in Brazil averages about 80 tons.

The aforementioned Mexican linaloe oil is obtained from the wood and, to some extent, the fruit of several species of the genus *Bursera*, aromatic trees and shrubs native to South America. They grow in Mexico profusely and flourish on poor or stony soil. The oil is obtained only from wild trees, none of which bear until at least 20 years old, incisions being utilized to stimulate yields. Lacerations expose the heartwood which is fragrant with the oil.

The wood itself is later cut down, reduced to chips and distilled at small distilleries in galvanized iron or copper stills. Half a dozen Indians tend each still and the yield of sweet-scented, colorless or pale-yellow oil runs about two percent. Occasionally linaloe oil thus obtained is blended with that obtained from the fruit of the trees. From Mexico the aromatic essential oil finds its way to perfume manufacturers who use it along with other such oils in creating and blending fragrant cosmetics.

Finally, the oleoresin of copaiba, another gift of the Americas, is used in several industries and in the medical profession. This resin becomes a fixative in scenting soaps and perfumes, an ingredient of varnishes, and is used in photography to emphasize half-tones and shadows, and from early times has been known to be an antiseptic and healer. It is obtained from trees of the genus *Copaifera* which are indigenous to northern South America where they grow wild in the Amazon Basin jungles and extend into Venezuela, Colombia, the Guianas and on south to Rio. The fruit of the trees is a one seed legume.

Native woodsmen make vertical incisions or drill holes in the trees several feet above the ground, one above another, reaching to the center of the trunk. Ducts within the trunk enlarge and join, forming cavities where the resin accumulates and a single tree may yield 10-11 gallons of it. As it flows from the tree copaiba is clear, pale in color, and very thin, but it becomes thicker and yellow when exposed to air. It has a slightly greenish fluorescence,

. . . to relieve the strain of

CHRONIC IRREGULARITY

WHEN aberrations of the menses suggest that normal function has overstepped the bounds of physiologic limits—the physician is often confronted with a condition which proves highly distressing to the patient. For such cases (as in amenorrhea, dysmenorrhea, menorrhagia and metrorrhagia), many physicians rely on Ergoapiol (Smith) with Savin as the product of choice. By its unique inclusion of all the alkaloids of ergot (prepared by hydro-alcoholic extraction), and the presence of apiol and oil of savin—Ergoapiol (Smith) with Savin provides a balanced and sustained tonic action on the uterus, affording welcome relief in many functional catamenial disturbances. It produces a desirable hyperemia of the pelvic organs, stimulates smooth, rhythmic uterine contractions, and also serves as an efficient hemostatic and oxytocic agent. General dosage: 1 to 2 capsules 3 to 4 times daily.

Write for your copy of the new 20-page brochure "Menstrual Disorders—Their Significance and Symptomatic Treatment"
Supplied only in ethical packages of 20 capsules.

ERGOAPIOL (Smith) *with* SAVIN

MARTIN H. SMITH COMPANY • 150 LAFAYETTE STREET, NEW YORK 13, N. Y.

MHS

Ethical protective mark, "MHS" visible when capsule is cut in half at seam.

a peculiar aromatic odor, and a persistently bitter taste.

In 1939 Brazil exported 172 short tons of this resin, most of which came to this country. The oil is distilled from the balsam and is transparent and somewhat opalescent, sometimes colorless, but often varies from pale yellow to golden brown. The Indians applied this oil as a healing agent for sores, ulcers, and tetanus, and early Portuguese colonists attributed therapeutic qualities to it, some of which science has confirmed. It is first recorded in England in a work published by the historian Purchas, in 1625; it appeared in the London *Pharmacopoeia* for 1677.

Copaiba was introduced into the U. S. *Pharmacopoeia* in 1820. Taken internally in capsules it produces a sense of heat in the throat and stomach, an irritant action which extends throughout the alimentary canal making it a diuretic, laxative, or purgative, depending on dosages. It is used in treating chronic inflammations of the mucous membranes and as an emollient. Several botanical species of the tree produce this balsam, the resin usually being known, however, by the name of the port from whence it was shipped.

Granite Gables

Louisiana Inaugurates Visual Aid Program

Funds made available by a joint pooling of money, primarily used for health education materials of the two health agencies, and by sections on cancer, maternal-child health, and other various divisions, will go toward a five year visual aid training and production program in the Newcomb Art School, Tulane University of Louisiana, New Orleans.

This $200,000 program aims to do the following: 1. train students in the production of visual aid materials under a five year curriculum; 2. production of materials including photography, film strips, animated presentations of statistical, graphical and pictorial matter, exhibition layouts and the development of pamphlets and posters; 3. consultation service to the visual aid consultant and joint advisory committee on public health education, and 4. training of selected members of the two health agencies in the visual aid program.

* * *

Lichen chronicus simplex of Vidal is named after Emile Vidal (1825-1893), who was an exceptional student of dermatology accredited with numerous studies as bacterial investigation of pityriasis rosea, eczema of adjoining surfaces, sections of urticarial wheals, and the first description of Keratosis blenorrhagica (1893).

PERTUSSIN
increases the RTF* which is the ABC of
Cough relief

—in acute and chronic bronchitis and paroxysms of bronchial asthma . . . in whooping cough, dry catarrhal coughs and smoker's cough. Pertussin increases the Respiratory Tract Fluid which is the Key to its effectiveness in relieving such coughs.

Pertussin therapy is simple but fundamental. It lends a helping hand by the practical device of assisting Nature to work in its own defense. No wonder Pertussin has been in successful use for over thirty years.

Entirely free from opiates, creosote and chloroform, Pertussin is well tolerated—without undesirable side action—by children and adults alike, and is pleasant to take.

* Respiratory Tract Fluid.

PERTUSSIN
For Children, Adults and the Aged
SEECK & KADE, INC. NEW YORK 13, N. Y.

IN CORYZA
PHARYNGITIS INFLUENZA

Here is Prompt Relief from the Distressing Symptoms

The acute and oftentimes severe discomfort of many respiratory infections is quickly controlled by Dasin. Exerting analgesic, antipyretic, and diaphoretic actions, Dasin alleviates muscular aches and pains, aids in lowering the temperature, and reduces hypersecretion from nasal and bronchial mucous glands.

Each Dasin capsule provides:

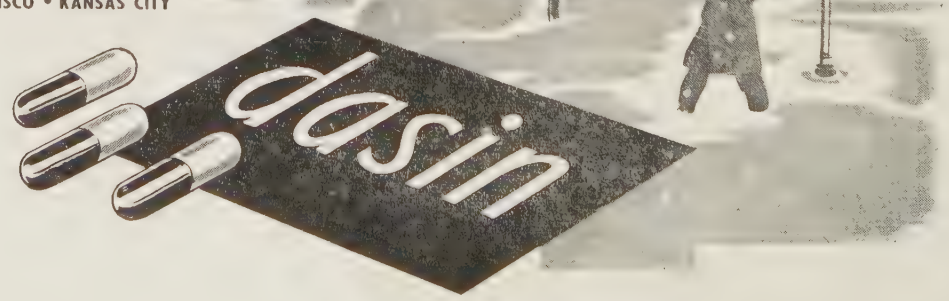
Dover's Powder	½ gr.
Aspirin	2 gr.
Acetophenetidin	1½ gr.
Camphor	¼ gr.
Caffeine	⅛ gr.
Atropine sulfate	1/500 gr.

Dasin is valuable for obtaining relief in coryza, pharyngitis, and influenza. Each capsule is tightly sealed, hence the odor of camphor is not discernible.

Average dose, 1 or 2 capsules every two to three hours. Available on prescription through all pharmacies. Dasin is an exempt narcotic mixture.

THE S. E. MASSENGILL COMPANY
Bristol, Tenn.-Va.
NEW YORK • SAN FRANCISCO • KANSAS CITY

SE Co



Sense of Smell Diagnosed by Yale Psychologists

It was revealed recently by two Yale University psychologists that the ability to smell is made possible by sense organs which act as radio transmitting stations sending out impulses at extremely high frequencies.

This idea, which was originated by Lloyd H. Beck, department of psychology, who worked experiments out in cooperation with Walter R. Miles, of the Yale School of Medicine, upsets previously held notions that the nose can smell because odorous substances set up chemical reactions and it moves the olfactory sense into the realm of radiation physics.

This discovery may have important practical implications for certain industries and will take the guesswork out of smelling substances used in those trades for it establishes a scientific basis for what the nose does and why.

The Yale scientists showed how they had been able to prove their "broadcast" theory by experiments on bees and cockroaches, through presentation of slides and photographs.

The tests showed that the bees clustered about the entrance to one box containing honey in the ratio of five and ten to one, as compared with clustering about another box which also contained honey but had a barrier of glass behind the plastic. This experiment illustrated that the sense of smell is a form of radiation which flows outward from the insect toward the object to be smelled and that the smell does not first penetrate the nasal organs of living organisms to set up the reaction.

According to Yale psychologists a "smell spectrum" is now theoretically feasible in analyzing all odors and the sense of smell can be plotted out on a color spectrum pattern.

Following the same principle of color mixing, primary and secondary odors will be obtained, which will result in deleting guesswork as to the processes in the perfume, coffee and tea industries which depend upon odors and fragrances in many stages of analysis.

Bees were used to carry out various experiments since such insects have been proven to have the same range of ability to smell and detect odors as man. The nose of human beings is appropriately designed to conform with the theory of smell advanced today. The olfactory organs which govern smell are located at a point behind and between the eyes where the body temperature is highest and therefore can cool off progressively down to body temperature after sniffing a substance for a period of time.

The broadened development of the "smell spectrometer" is expected to vividly describe odors as well as give a substantial scientific boost to the industrial chemist.

FOR IODINE RESULTS WITHOUT THE USUAL IODINE DISTURBANCES

ORGANIDIN—WAMPOLE

A STABLE PREPARATION OF IODINE

IODINE

ORGANICALLY COMBINED

FOR INTERNAL ADMINISTRATION

Freely miscible with water. Contains no free iodine, no hydriodic acid, no inorganic iodides and no alcohol.

ORGANIDIN is absorbed readily from the gastro-intestinal tract, with less irritation and less toxicity than is produced by elementary iodine. Thus it permits a maximum effect with a minimum iodine dose.

A superior product which may be administered over an extended period of time with little probability of causing gastro-intestinal disturbances or iodism.

SUPPLIED IN 1-OZ. BOTTLES

MADE SOLELY BY

HENRY K. WAMPOLE & CO., INC

MANUFACTURING PHARMACISTS

PHILADELPHIA 23, PA. U. S. A.

Doctors' Profess Use of X-Rays for Treatment of Infections

Doctors J. F. Kelly, D. A. Dowell and John E. Downing, of Creighton University School of Medicine, Omaha, Neb., reported to the Radiological Society of North America that the use of mild x-rays can prevent and cure a number of different infections.

The x-rays used for this purpose are much less intense than those used for cancer, the doctors stated. The rays can prevent or cure erysipelas, gas gangrene, pneumonia, acute peritonitis, the infections coming from bites by human teeth, and boils and carbuncles.

They went on to say that the rays do not kill the germs causing the infections, but stimulate the body's white blood cells and maybe other blood organisms to attack and clean up the disease.

Eye Hospital Dedicated to University of Alabama

Dr. Alston Callahan, professor of ophthalmology, is director of the recently dedicated Thigpen-Cater Eye Hospital, which has become a division of the Medical College of Alabama, Birmingham.

This institution is in commemoration to Dr. Charles A. Thigpen and Dr. Job T. Cater, of Montgomery and built through the generosity of Dr. Thigpen.

Rigid Restaurant Conservation Urged by Hilleboe

Dr. Herman E. Hilleboe, state commissioner of health and chairman of the New York State Food Commission, made a plea to restaurants, hotels, and other eating establishments to help conserve vitally needed food stocks by guarding against food damage and waste in every possible way.

If war would be declared on rodents and vermin by these eating establishments large quantities of food could be saved . . . and additional food could be preserved by the assurance of proper refrigeration in such designated places.

South Dakota Now Publisher of State Journal

The beginning of this year saw the commemoration of the *South Dakota Journal of Medicine* by the South Dakota State Medical Association.

Dr. Roland G. Mayer, Aberdeen, secretary of the association, will serve as temporary editor pending appointment of a permanent editor. The association has published, since December 1946, *This Is Your Medical Association,* a bulletin which contained reviews of hospital case reports.

POST - OPERATIVE INSOMNIA

As a means of overcoming restlessness and insomnia during post-operative convalescence

PASADYNE

IS IDEAL

It is therapeutically reliable, does not disturb the gastric function, depress the circulatory system or habituate the patient to its use.

John B. DANIEL, INC. ATLANTA, GA.

RIASOL for TOP PERFORMANCE in PSORIASIS

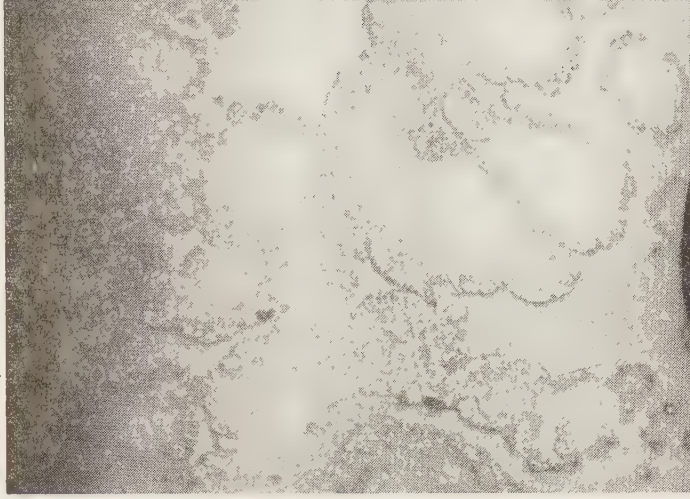
Physicians throughout the nation are prescribing RIASOL for psoriasis therapy. This is because experience has proved this unique formula to be a top performer in obtaining outstanding results.

RIASOL often clears the disfiguring, scaly patches with gratifying promptness and in many instances recurrences are minimized. Moreover, it is simple, pleasant and convenient to use.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages are necessary. After a week, adjust to patient's progress.

RIASOL is never advertised to the laity. Supplied in 4 and 8 fld. oz. bottles, at pharmacies or direct.



BEFORE USE OF RIASOL

DURING USE OF RIASOL

AFTER USE OF RIASOL

MAIL COUPON TODAY
PROVE RIASOL
YOURSELF

SHIELD LABORATORIES
8751 Grand River Ave., Detroit 4, Mich.

MR 1-48

Please send me professional literature and generous clinical package of RIASOL.

..... M.D. ..... Street

City ..... Zone ..... State .....

Druggist ..... Address .....

RIASOL for PSORIASIS

Critique

Study normals In the London *Lancet* for June 15, 1929, Lindsey W. Batten put in a plea for a department of clinical physiology, saying that medical students did not get the needed information about normal types of youth, age, infancy, and adolescence, about the long thins and the short broads, the normal heart and lung sounds and their variations, the normal temperature, larynx, eardrum, renal secretions, color vision, and protein metabolism. The medical graduate knows all about milk and gliadin in bread, the nerve supply of a hundred voluntary muscles, and could diagram the cerebral convolutions; he knows facts galore, but not men, women, and children as living organisms in particular environments—eating, working, playing, sleeping. He sees plenty of pathology but knows healthy subjects very imperfectly; he confuses poor physiques with pulmonary types; sinus rhythm with arrhythmia; postural albuminuria with nephritis; unfamiliar normal murmurs with mitral stenosis. He condemns rather large tonsils on size alone and interprets the full female adolescent thyroid as a case of Grave's disease. He does lifelong damage to patients by his errors. He may diagnose general ill-health as abnormality, retroflexed uterus, sagging transverse colon, ren mobile, costa cervicalis, hypochloridia or hyperchloridia, hypotension or hypertension, curvature of the spine, deviating nasal septum, excessive cutaneous reaction to milk or what have you, excessive acidity or alkalinity; or a brand new abnormality he had invented. Let him consider instead the years of perfect health enjoyed by many patients who have several conditions he would regard as abnormal but which may be normal to them. Often he settles on one abnormality and makes it a fad, finding it in every examination; then other doctors follow. Let him remember that about a fifth of any group of athletes he might examine would exhibit some abnormality. He needs to know far more about the normal reactions of normal men and women to customary environmental changes.

Public utility Said Cleon Mason M. D., in July 1929: "Long ago, as a nation, we realized that education was essential to our system of government, so we built and maintained public schools. Industrialism is forcing upon us the economic value of health in no uncertain terms. The doctors have been preaching this the last twenty-five years; gradually governmental agencies are grasping the idea. Good medicine is a public utility and medical care is not only the right of productive labor but is as well a powerful protection of accumulated wealth. A system of publicly owned and operated hospitals can make this service available to every citizen."

Women, arise: "And so, midwives had this field pretty much to themselves over countless centuries. And if there be one instance where biting criticism can be directed at woman as a professional figure, this is it. Amazing and incredible though it seems, women completely failed to take any step that would aid their fellow women and themselves at this crucial event. In all the thousands of years during which agony and death were observed in a thousand ways, no woman invented or contrived any method or instrument intended to lessen the pain attendant on childbirth, or to make it a safer experience. It was only when man came into the field that inventive minds sprung into action and obstetrical progress began." R. H. Hoffmann's *Struggle for Health.*

Riboflavin synthesis with yeast: The Department of Agriculture's Northern Regional Research Laboratory, Peoria, Ill., has found out how to induce the yeast, *Ashbya gossypii*, to produce very considerable quantities of the vitamin riboflavin. The process has ultimate commercial possibilities in the refermentation of alcoholic still liquors. Young, vigorous yeast cells do much better work at this job than do oldtimers aged 24 hours or more. If the inoculum used is five days old it almost altogether lacks ability to produce riboflavin; extremely small quantities of fresh inoculum are needed. The yeast works best in an acid and poorly in an alkaline medium. The amount of riboflavin it produces is closely related to the amount of glucose supplied.

The gangster Way back in July 1929 (*The Nation,* July 10) Dr. William J. Hickson, director of the psychopathic laboratory of the Chicago Municipal Court, who had examined 40,000 criminals, was declaring that gangsters were dementia praecox types with a mental age of 12 to 13, and that such hyperemotionals should be recognized early and placed in institutions for life or until cured, if that be possible. Being emotionally deficient or infantile, intelligence and education merely fitted them for greater crimes. The emotional incompetence of the gangster was his greatest defect from the standpoint of stable society. Because of it, punishment meted out to his fellow gangsters was no deterrent to him whatever. Unmotivated by revenge, the gangster is superstitious; his sentimentality matches his emotional infantilism; he naively accepts a childlike code of honor; killing others is a mere part of his business and is conducted like the rest. The defects are usually hereditary and incurable. Time and again Dr. Hickson's laboratory had labeled youths as potential killers only to have the prophecy fulfilled. Segregation should take place before the crime, as it could so readily do in so many instances, but we have not as yet the proper type of institution to make such segregation beneficial to the individual segregated.

Test for rutinlike substances: Scientists at the Pharmacology Division of the Bureau of Agricultural and Industrial Chemistry, Albany, Calif., have developed a simple method for detecting substances with rutinlike properties. It revolves around the permeability of the cutaneous capillaries of rabbits to the drug when injected. Rutin, first prepared from tobacco plants, but later from buckwheat plants which are rich in it at specified growth stages, by scientists at the Eastern Regional Research Laboratory, Department of Agriculture, near Philadelphia, decreases capillary fragility in human beings, thus minimizing danger of stroke in those suffering from hypertension. It acts like a vitamin and must be continually administered. Application of chloroform to the skin of rabbits previously injected with trypan blue, results in a rapid local accumulation of the dye in the area so irritated. But, after injections of rutin, it takes much longer for this local accumulation to occur in the skins of rabbits, since the drug decreases the permeability of the surface capillaries. The method provides an easy mean of detecting other substances with rutinlike properties.

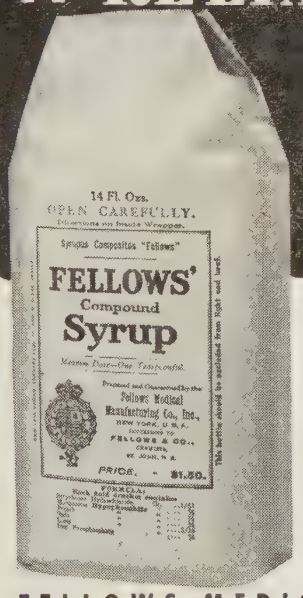
Virus-Serum Act: This legislation, enforced by the U. S. Bureau of Animal Industry, works so well that a violation followed by conviction is rare. It protects livestock owners from worthless or undependable biological products intended for the treatment of diseased domestic animals. Thus a high standard of quality is maintained in such products. A recent and rare conviction concerned a firm which shipped a worthless hog cholera serum interstate. Moreover, the material had not been prepared under a U. S. veterinary license, in compliance with regulations prescribed by the secretary of agriculture, though it bore label statements to indicate that it had been so prepared.

Ills flesh is heir to To read and hear the advertisements one would think Americans had lost their famous and characteristic pep. Doctors also find lack of pep is a common complaint of patients, about one in five consulting the physician about fatigue and exhaustion. A while ago Dr. C. W. Dowden of Louisville attributed this condition to world war worries and stresses, influenza and its after-effects, bad booze, and the carbon monoxide-saturated atmosphere automobiles make us breathe. Meanwhile Dr. Lovell Langstroth of San Francisco was contending that American dietary deficiencies were causing a build-up of degenerative diseases. He claimed that bread, meat, potato, all forms of sweet dessert and accessory foods like butter, cream, sugar, and mayonnaise, comprised 88 percent of the diet of patients with hypertension, arteriosclerosis, diabetes, heart and circulatory ills, and occasional unexplained headaches. He advised them to eat more vitamin-rich foods—eggs, milk, fresh fruits and vegetables.

A RELIABLE BITTER TONIC

FORMULA—*Each fluid drachm contains:*

Strychnine Hydrochloride	Gr. 1/61
Manganese Hypophosphite	Gr. 1/8
Potassium Hypophosphite	Gr. 1/8
Sodium Hypophosphite	Gr. 1/8
Calcium Hypophosphite	Gr. 5/16
Iron Pyrophosphate	Gr. 1/8



FELLOWS'
COMPOUND SYRUP
SAMPLES ON REQUEST
FELLOWS MEDICAL MANUFACTURING COMPANY, INC.
26 CHRISTOPHER STREET • NEW YORK 14, N. Y.

So-called plant hormones: These are, in reality, some 100 or more chemicals that have proved to be plant growth regulators. They are not hormones in the animal-physiology sense. Their most important uses are as weed killers (2, 4-D) and for prevention of preharvest drop of certain apple and pear varieties (2, 4-D and alpha-naphthaleneacetic acid.) But indole-butyric acid proves useful for rooting cuttings that are difficult to root, such as holly; ethyl-naphthalene acetate prevents the sprouting of stored potatoes and root crops, as well as of such plants as rosebushes. Indole-butryic acid can be used to fertilize greenhouse tomatoes to increase the fruit set, better yields, and accelerate ripening. Spraying with 2, 4-D hastens the ripening of fruit like bananas and naphthaleneacetic acid insures the setting of numerous berries of good color on female holly plants. The latter also improves the storage quality of certain apple varieties which are otherwise subject to scald. New varieties of growth regulators and new uses for those already studied seem to happen every day. Whereas 2, 4-D kills the broad-leaved weeds among lawn grass without hurting it, a new substance found by British scientists and nicknamed IPC does just the reverse. Hence you can kill the weeds or the grass at will by choosing which hormonelike substance you spray. You can, in fact, plant corn and fertilizer in ground already occupied with weeds and grass, and eliminate the latter at the same time by spraying with the proper weed and grass killers. Then you can go on vacation until the corn crop is ready to harvest—no plowing, no cultivating, no weeding in the ordinary sense. Incidentally a thing like 2, 4-D is not a plant poison; it is a chemical which completely disrupts the plant's growth processes, causing it rapidly to use up all the reserves stored in its roots and to grow itself to death, twisted as if in agony. A mere bit dropped on the leaf spreads quickly throughout the entire plant; if tracer atoms of radioactive elements are present the plant can take its own picture and show this process in detail. Most flowers and vegetable garden plants are highly sensitive to injury by 2, 4-D.

Science in farming: This is the name of the *Yearbook of Agriculture* for 1943-47. It covers the Department's scientific achievements for the war period, contains about half a million words, and is much too heavy to hold easily and read. However, physicians will find much of interest in it, not only because nutrition science threads its way all through, but actual medical matters pop up every so often. More specifically the attention of physicians and medical research workers is called to such chapters as those entitled: Drugs to Control Parasites: Thyroprotein for Cows; Artificial Breeding; Hormones in Reproduction; More Vitamin A in Milk; the Inside of a Dairy Cow; Genetics and Farming; The Chemistry of DDT; Aerosols for Insects; Pests that Attack Man; DDT in the Home; Crops that Resist Insects; Controlling Pests of Stock; Penicillin; Rutin for the Capillaries; Uses for Vegetable Wastes; What We Eat, and Why; Protein Is Essential to Life; Unidentified Nutrients—and many more. There is also a wealth of informative illustrations. The book costs $2 and may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., if you cannot persuade your Senator or Representative to leave you a free copy.

A new artificial insemination hazard: Scientists in the U. S. Bureau of Animal Industry say that, while specific instances have apparently occurred of the venereal transmission of trichomoniasis from infected bulls to females, veterinary texts record little of this. But it has been demonstrated that indirect transmission by artificial insemination can readily occur. Nine previously uninfected females were inseminated with undiluted semen from a bull infected with *Trichomonas foetus; 7* became infected as a result of 7 inseminations; 3 did not become infected in spite of 6 inseminations. This finding emphasises the importance of regularly ascertaining the status of all bulls to be used as sources of semen.

The Critic

TOWNS TREATMENT FOR ALCOHOLISM AND NARCOTIC & HYPNOTIC ADDICTIONS

Established 1901 *Now Generally Accepted*

PROVIDES: (1) AN ASSURANCE OF A DEFINITE MEDICAL RESULT
(2) AN ASSURANCE OF LENGTH OF TIME REQUIRED AND EXACT COST
(3) AN ASSURANCE OF ABSOLUTE PRIVACY

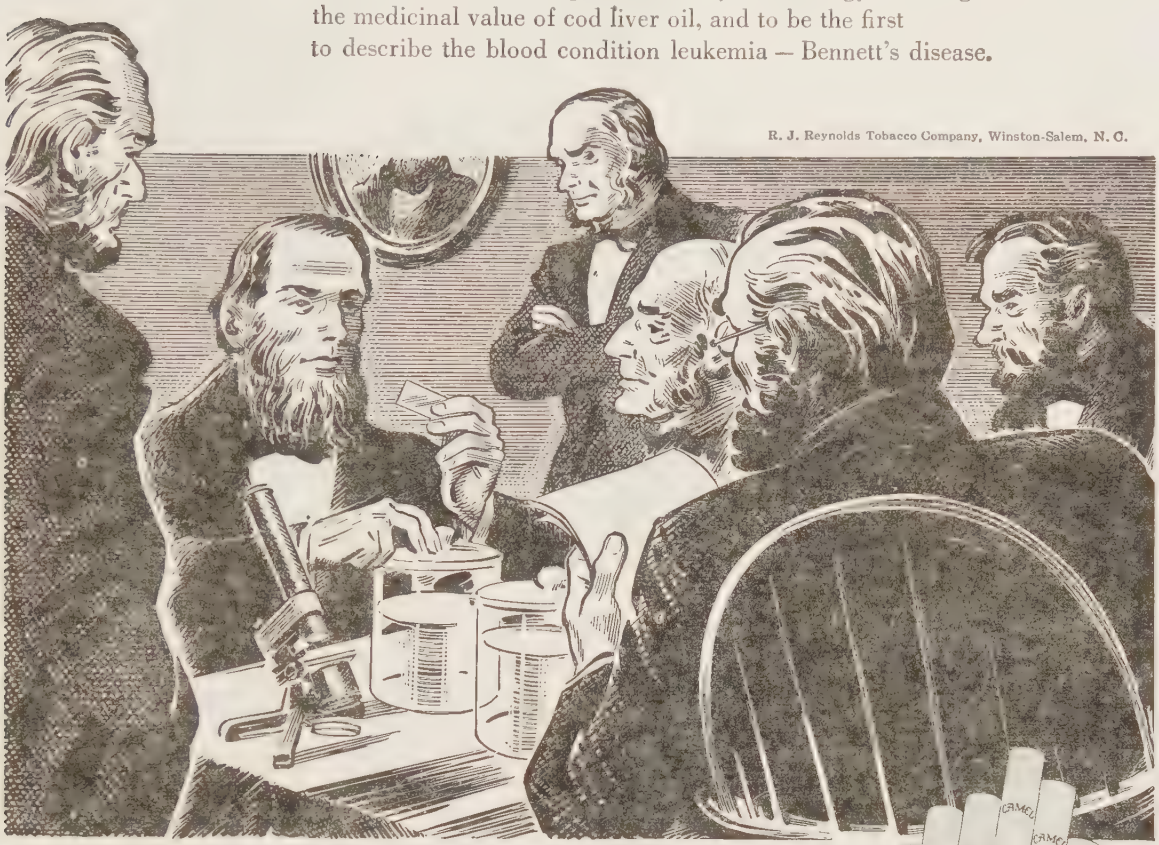
Our "SYMPOSIUM OF MEDICAL OPINION" includes case histories of this successful treatment endorsed by many physicians. Copy on request.

CHARLES B. TOWNS HOSPITAL
FOR ALCOHOLISM AND DRUG ADDICTION EXCLUSIVELY
Completely redecorated and modernized
293 Central Park West, New York 24, N. Y. Tel.: SCHuyler 4-0770

Experience is the Best Teacher

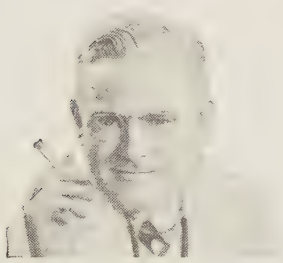
JOHN HUGHES BENNETT (1812-1875) proved it in histology

Bennett's experiences, gained by linking physiology with clinical medicine, led him to institute the practical study of histology, to recognize the medicinal value of cod liver oil, and to be the first to describe the blood condition leukemia — Bennett's disease.



R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

Yes! And experience is the best teacher in smoking, too!



DURING the wartime cigarette shortage, people smoked many different brands—any brand they could get. And as they smoked—they naturally compared the different brands . . . for taste, for mildness, for coolness . . . for all-round smoking enjoyment. More and more smokers found from the experience of those comparisons that Camels suit them best.

Result? *More people are smoking Camels than ever before!*

According to a Nationwide survey:

More Doctors Smoke CAMELS

than any other cigarette

Three nationally known independent research organizations asked 113,597 doctors — in every branch of medicine — to name the cigarette they smoked. *More doctors named Camel than any other brand.*

For once they actually agree!

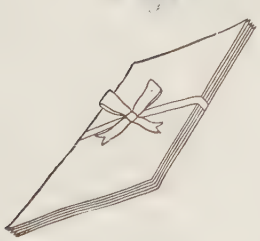
Hope and Crosby, in the movies, seldom see eye to eye.

But there's one thing they really do agree on —they both think U.S. Savings Bonds make wonderful Christmas gifts!

SAYS BOB: "They're swell for *anybody* on your list. You couldn't pick a nicer, more sensible, more welcome present. Even Crosby knows that."

SAYS BING: "I hate to admit it, folks, but Hope is right. And remember this—you can buy Bonds at any bank or post office in the U. S. A."

BOB AND BING (together): "This Christmas, why not give the finest gift of all—U.S. Savings Bonds!"



Give the finest gift of all ... U.S. SAVINGS BONDS

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

MEDICAL RECORD

PUBLISHED MONTHLY BY

THE MEDICAL JOURNAL AND RECORD PUBLISHING CO., INC.

VOL. 161, No. 1 JANUARY, 1947 WHOLE No. 2780

STREPTOMYCIN:— ITS VITAL IMPORTANCE IN ACUTE INTRA-ABDOMINAL SURGERY

DONALD C. COLLINS, M. D., F. A. C. S., F. I. C. S.

Hollywood, Calif.

Streptomycin is a relatively new drug and one that has been incompletely studied in its most efficient application to the field of surgery. Waksman and Associates (23), were the first to describe this valuable new antibiotic agent in January, 1944. This discovery immediately initiated a tremendous amount of research upon the properties of this preparation.

Early in the study of streptomycin, it was discovered that among the organisms susceptible to its bacteriostatic action in vitro, was the Myobacterium tuberculosis. As a result of this finding a tremendous amount of study has been done upon this one isolated application of its use. It was only recently that important studies were made upon the possible application of streptomycin in other fields of medicine and surgery, aside from tuberculosis.

Robinson (22), reported that streptomycin easily enters the normal or infected peritoneal cavity, making its first appearance in the peritoneal fluid thirty minutes after its administration. Thereafter, its concentration steadily increases after the first half hour, while the streptomycin concentration in the blood undergoes a rapid diminishment. Concentration of streptomycin in the peritoneal fluid is maintained practically at a constant level of five "S" units per cc. of peritoneal fluid until the expiration of two and one-half hours after its administration, when a single intravenous injection of 600,000 "S" units is given. Doses of 500 or 600 mgs., given as a single intravenous injection, produces peak levels of fifteen to twenty-three "S" units per cc. of peritoneal fluid.

"S" unit is that amount of streptomycin necessary to inhibit the growth of a certain test strain of Esch. coli in 1 cc. of medium; or *now:* equals one microgram of pure crystalline streptomycin hydrochloride.

Hinshaw and Feldman (13), pointed out that streptomycin appeared to be more effective than any of the sulfonamide drugs previously used in the treatment of tuberculosis and was much less toxic to the guinea pig. They reported upon thirty-four patients suffering from tuberculosis who had been treated with this drug in the preceding nine months. It was their opinion that streptomycin had only exerted a limited suppressive effect upon this disease.

Recent *Newsweek* issue of September 22, 1947, volume 30, page 52; reported that Dr. George E. Slotkin, urologist, University of Buffalo, using moogrol with one gram of streptomycin daily for thirty days, had cleared up six instances of proven renal tuberculosis. Moogrol is a refined derivative of chaulmoogra oil of leprosy fame. "These proven positive cases have become negative bacteriologically, culturally and clinically," he said. "There has been spectacular improvement in each and every case". The results were so "striking," that he recommended the treatment for all forms of tuberculosis.

In the past five years the value of penicillin has become firmly established as of great importance when combined together with the sulfonamides in treating acute inflammations within the peritoneal cavity. The value of the combination of these two drugs was dramatically drawn to the attention of the surgical world by Crile (6), about a year ago.

Crile used massive doses of penicillin and reported spectacularly successful results. Others, such as Hoer (15), Mueller (20), Karl Meyer and Associates (18), Wheatley (24), Norris (21), Kaufman and Hersheimer (17), Arnold Jackson (16), Farkas (9), and Brown (3); submitted statistical studies on instances of acute perforative appendicitis and demonstrated convincingly that the use of chemotherapy and antibiotics had effected a marked reduction in mortality and postoperative morbidity in this type of appendicitis.

A recent report (4), was made upon acute perforated gastroduodenal ulcers. It was found that between the years of 1936 and 1941, the mortality was 23.07 percent; this being largely before the advent of sulfonamides and antibiotic preparations. In

the period between 1942 and October 1, 1947, the mortality dropped to 13.04 percent.

It was found upon studying these histories, that beginning in 1942, the patients who received sulfonamides alone had a reduction in their mortality to 11.1 percent.

Instances since 1945 in whom intraperitoneal implantation of penicillin was done, comprising 22.2 percent of the entire series studied; revealed that there were no deaths and postoperative morbidity was reduced 7.6 percent. Beginning in 1946, streptomycin came into use as a valuable auxiliary aid, and 4.4 percent of the entire series of acute perforated gastroduodenal ulcers were treated with it. No deaths have occurred since the beginning of the use of this preparation.

It was found (5), that in 759 instances of acute perforated gangrenous appendicitis with a mortality of 9.2 percent; that when some of these patients received streptomycin therapy beginning in August, 1946; that no additional deaths happened up to the time of the submission of that contribution for publication on October 1, 1947. In this same study of acute appendicitis, there were 3,169 instances of simple acute non-perforated appendicitis. With the advent of the generalized use of penicillin in 1945 and the later additional employment of streptomycin in 1946, no further deaths occurred. In fact, there have been no deaths in instances of simple acute appendicitis since 1942 when the sulfonamide preparations were first initiated. The mortality for 3,169 cases of simple acute appendicitis was 0.31 percent.

Since the advent of antibiotics in the treatment of simple and perforative acute appendicitis, and in which the peritoneal cavity was sutured tightly closed without drainage; no instance of the postoperative development of peritoneal abscess formation was encountered.

Hinshaw (12), presented a valuable contribution to the subject early this year in which he recommended the simultaneous use of all three of our present-day antibacterial agents. He urged the combination of streptomycin with penicillin as being a thoroughly logical procedure, particularly if the peritoneal cavity has become soiled from intestinal contents.

Additional experimental work presented by Blain and Kennedy (2), revealed in experimentally produced intestinal obstructions of the strangulated-low-ileal type, that the use of penicillin, in instances of toxemia resulting from intestinal obstruction, is of great value in the detoxification of the deleterious bacterial exotoxins present.

Farris and Romack (10), believed that bacteria are the predominating factor causing deaths in "closed loop" obstructions and that streptomycin had a marked beneficial influence in combating their deleterious toxins. I heartily concur in this opinion. Davis (7), also, substantiates this view.

Hirshfield and Associates (14), administered streptomycin to twelve patients suffering from peritonitis. Five cases resulted from acute perforated appendicitis, six additional instances arose from a perforation of an acute gastroduodenal ulcer, and the final case resulted from a perforation of a carcinoma of the cecum. They concluded that the value of streptomycin therapy alone in these cases was exceedingly difficult to evaluate. Streptomycin, in their experience, had presented no spectacular effects and their patients acted similarly to those we were formerly accustomed to see before the appearance of chemotherapeutic agents.

In these twelve patients, two deaths occurred in late neglected instances. They injected 1,000,000 "S" units into the peritoneal cavity at the time of operation and an equal amount was given intramuscularly every twelve hours for a total of twenty-six doses. Zintel and Associates (25), shared a similar opinion as to the lack of pronounced results in peritonitis.

DeBakey and Pulaski (8), summarized their experience with streptomycin in some United States Army Hospitals. In thirty instances of peritonitis, twenty-four soldiers were definitely improved upon this therapy; three were unimproved and three patients died. In their opinion, the only reason for the cessation of the use of streptomycin was the appearance of either vestibular disturbances or deafness.

Hettig and Adcock (11), studied the toxicity of this preparation in humans. They reported that nausea, fever, malaise, renal-irritation, reactions at the local-site of injection and arthralgia were toxic reactions caused from impurities contaminating some commercial streptomycin preparations.

Molitor and his Associates (19), stipulated that fatty metamorphosis in the liver and kidneys had occurred in experimental animals and was directly due to streptomycin overdosage and not to any possible impurities. They indicated that it is becoming more and more agreed upon that there is a tremendous variation among patients in their susceptibility and reaction to streptomycin dosage. Molitor said that four grams of streptomycin administered daily over a considerable period of time, has, in his experience, been a relatively safe dosage to employ.

Davis (7), has been studying and evaluating antibiotics in the treatment of intestinal obstruction. His highly important conclusions will cause definite improvements in the surgical management of acute intra-abdominal emergency lesions in the future. In his experience, using rabbits, streptomycin possessed more polyvalent bacteriostatic activity for both gram positive and gram negative organisms than could be obtained from the use of penicillin. The maximum blood level concentration is reached, in his opinion, in two hours after the administration of the drug.

These experimental animals were first prepared by cutting off the blood supply to a 7.5 cms. segment of the small intestine. No other injury nor obstruction was done to the intestinal tract. In all controls there was a 100 percent fatality and 80 percent of these animals had perforations in the devascularized segment. If these experimental animals were given one dose daily of eighty mgs. of streptomycin, the mortality fell to 62.5 percent and

there was a reduction to 25 percent for the perforations. If this dosage of streptomycin was increased to two hundred mgs. daily for the first seven days, and continued at one hundred mgs. for the next twenty-one days, there were no deaths and no perforations. Again, in another group of rabbits, if they were given one hundred mgs. daily a week before the production of the artificial strangulated intestinal segment and were continued on one hundred mgs. daily after this procedure; there were, again, no deaths and no perforations!

It was found on studying other animals that the employment of succinyl sulfathiazole or penicillin was not able to equal the splendid results achieved by streptomycin alone. The 7.5 cm. area of devascularized intestine shrank down to about 4.5 cms. in length. Davis (7), was able to demonstrate that animals maintained on streptomycin therapy were able to regenerate new blood vessels from either the intramural vessels in the strangulated loop or from ligated vessels remaining in the mesentery. There was also a slower regeneration of the mesentery.

If these animals received an inadequate dosage of streptomycin (80 mgs. per kilogram of body weight) and survived; there was a progressive narrowing of the diameter of the lumen of the artificially strangulated segment and later an ultimate bowel obstruction developed. Davis (7), believes that 100 mgs. of streptomycin per kilogram of body weight was the correct dosage to be used in his laboratory rabbits. This would be comparable in the human to a daily dosage of 7.0 grams. Streptomycin has been unjustly given a poor reputation, but this has been due to the use of too small and infrequent dosages.

Davis (7), decided that the *bacterial factor* was the third and most important component in the causation of gangrene and subsequent perforation of strangulated and obstructed loops of human intestine. If the number of bacteria lining the walls of the strangulated loop of intestine could be reduced, gangrene and perforation would not occur in that loop of bowel. Whether all of these conclusions derived from the experimental animals can be applied equally effectively to the human, is a matter that must still be determined.

Streptomycin definitely modifies the postoperative course of patients with peritonitis. It has been my custom to administer between four and five grams daily, divided into three hourly doses over a five to seven day course. I have not seen permanent vestibular complications develop nor deafness appear, *if* the total dosage of streptomycin was kept below fifty grams.

The question is raised whether instances of mesenteric thrombosis in the future may not be successfully treated with antibiotics, particularly streptomycin, helping to tide your patient over until a new blood supply can develop. This is a very intriguing thought to contemplate!

The present use of antibiotic therapy is not being utilized to its optimal capabilities and many patients do not receive sufficiently adequate dosage to do them any particular amount of good. This therapy in the presence of human strangulated intestinal obstruction will not prevent perforation, but will combat the peritonitis and will be quite effective against gram negative bacilli and members of the Esch. coli group.

Antibiotics cannot be used as a substitute for prompt and early surgical intervention. One cannot predict preoperatively whether or not a non-obstructed strangulated type of lesion is present. More instances of acute perforative appendicitis should be treated preoperatively with massive doses of antibiotics, and especially with streptomycin.

Evidence is accumulating that if the bacterial flora can be held to a minimum, before and after performing a bowel anastomosis; that despite a poor vascular supply, these suture lines will hold and heal by primary intention! Streptomycin can be administered preoperatively through a duodenal tube, one gram every six hours daily. Such administration of streptomycin, which remains within the gastrointestinal tract, will reduce the number of Coliform organisms from approximately 100,000,000 organisms per gram of wet feces to the low total of 1,200 organisms per same unit of measure.

According to John H. Albers (1), 36 percent mortality occurred in a recent series of eighty-two instances of bowel obstruction at the Los Angeles County General Hospital for the year 1946. However, 68 percent received antibiotic therapy, but only 16 percent were given this type of treatment preoperatively. Streptomycin was rarely used preoperatively. It is reported that 50 percent survived their surgical treatment, and 40 percent of intestinal resections lived. One-third of the deaths were attributed to excessive delay on the part of the patient.

Conclusions

As time passes, it is believed that streptomycin will occupy a position of diminishing attention in the treatment of tuberculosis, and will assume its rightful place of major importance in the successful treatment of peritonitis. There will then occur a consequent sharp reduction in present excessive mortality percentages for bowel obstruction, perforated acute appendicitis, and perforated gastroduodenal ulcers.

Bibliography

1. ALBERS, JOHN H.: In discussion of paper by DAVIS, HARRY A. (7).
2. BLAIN, A. and KENNEDY, J. D.: The effect of penicillin in experimental intestinal obstruction. Studies on strangulated low ileal obstruction. *Bull. Johns Hopkins Hosp.* 79: 1-20. July, 1946.
3. BROWN, MERLE J.: Penicillin and sulfonamide treatment of peritonitis. *Am. Jour. Surg.* 73: 56-61, January, 1947.
4. COLLINS, DONALD C.: An eleven year review of perforated peptic ulcers at the Hollywood Presbyterian Hospital. *Ann. Western Med. and Surg.* 1: 282-228, September, 1947.
5. COLLINS, DONALD C.: Present concepts in the management of both chronic and acute appendicitis. *Jour. Internat. Coll. Surgs.* In Press, October, 1947.
6. CRILE, GEORGE, JR.: Peritonitis of appendiceal origin treated with massive doses of penicillin. *Surg., Gynec., and Obst.*, 83: 150-162, August, 1946.
7. DAVIS, HARRY A.: Evaluation of anti-biotics in the treatment of intestinal obstruction. Presented before: Annual meeting, department of general surgery, College of Medical Evangelists, University Club, Los Angeles, California. November 5, 1947.

8. DE BAKEY, MICHAEL E. and PULASKI, EDWIN J.: An analysis of the experience with streptomycin therapy in United States hospitals. *Surgery*, 20: 749-754, December, 1946.

9. FARKAS, JOHN V.: Acute appendicitis. A study of the cases admitted to the Minneapolis General Hospital over a five year period. *Minn. Med.* 28: 551-558, July, 1945.

10. FARRIS, J. M. and ROMACK, H. H.: The effect of streptomycin in "closed loop" appendicitis. An experimental study. *Univ. Hosp. Bull.*, Ann Arbor. 12: 90-92, October, 1946.

11. HETTIG, R. A. and ADCOCK, J. D.: Studies on the toxicity of streptomycin for man. A preliminary report. *Science*. 103: 355-357, March 22, 1946.

12. HINSHAW, H. CORWIN: Clinical uses of streptomycin in medicine and surgery. *Surg. Gynec., and Obst.* 84: 579-583, April 15, 1947.

13. HINSHAW, H. C. and FELDMAN, W. H.: Streptomycin in treatment of clinical tuberculosis: A preliminary report. *Proc. Staff Meet.* Mayo Clinic. 20: 313-318, September 5, 1945.

14. HIRSHFIELD, JOHN WINSLOW; BUGGS, CHARLES W.; PILLING, MATTHEW A.; BRONSTEIN, BERNICE; and O'DONNELL, CHARLES H.: Streptomycin in the treatment of surgical infections. Report of experiences with its use. *Arch. Surg.* 52: 387-401, April, 1946.

15. HOERR, STANLEY O.: Mortality factors in acute appendicitis. *Surgery*. 18: 305-317, September, 1945.

16. JACKSON, ARNOLD S.: Nondrainage and early ambulation in cases of perforative appendicitis. *Arch. Surg.* 54: 644-655, June, 1947.

17. KAUFMAN, LOUIS R. and HERSHEIMER, WALTER L.: Sulfonamides in appendicitis. A review of 412 consecutive cases and an analysis of fatalities. *Am. Jour. Surg.* 65: 393-396, September, 1944.

18. MEYER, KARL A.; REQUARTH, WM. H.; and KOZOLL, DONALD D.: Progress in the treatment of acute appendicitis. *Am. Jour. Surg.* 72: 830-840, December, 1946.

19. MOLITOR, HANS; GRAESSLE, O. E.; KUNA, SAMUEL; MUSHETT, C. W.; and SILBER, R. H.: Some toxicological and pharmacological properties of streptomycin. *Jour. Pharmacol. and Exper. Therap.* 86: 151-173, February, 1946.

20. MUELLER, R. STERLING: Local use of sulfanilamide in treatment of acute appendicitis. *Ann. Surg.* 122: 625-630, October, 1945.

21. NORRIS, WILLIAM J.: Appendicitis in children. Review of one thousand cases taken from the records of the Children's Hospital, Los Angeles. *Western Jour. Surg., Obst., and Gynec.* 54: 183-192, May, 1946.

22. ROBINSON, HARRY J.: Streptomycin and streptothricin: The absorption, excretion, and chemotherapeutic properties. *Ann. New York, Acad. Sc.* 48: 119-142, September 27, 1946.

23. SCHARTZ, ALBERT; BUGIE, ELIZABETH; and WAKSMAN, S. A.: Streptomycin, a substance exhibiting antibiotic activity against gram-positive and gram-negative bacteria. *Proc. Soc. Exper. Biol. and Med.* 55: 66-69, January, 1944.

24. WHEATLEY, D. P.: Massive penicillin doses in general practice. *Brit. Med. Jour.* 1: 530-531, April 19, 1947.

25. ZINTEL, M. A.; WILEY, M.; NICHOLS, A.; and RHOADS, J. E.: The use of streptomycin in surgical patients. *Surgery*. 21: 175-183, February, 1947.

7046 Hollywood Blvd.

POUPARTITIS

N. B. JAFFE, M. D.

Leavenworth, Kans.

Poupart's ligament is formed by the lower border of the aponeurosis of the external oblique muscle; runs obliquely from the anterior superior spine of the ilium to the pubic tubercle. It is reflected at the lower point, forming the lacunar ligament, joins the fascialata below, and laterally the pectinate line.

It is a thick powerful closely aggregated mass of fibres, extending in the formation of the subcutaneous inguinal ring, external and internal pillars of the inguinal canal, the femoral ring, the cremaster muscle, and intercrural fibres. It is larger in men than in women and can be palpated through the skin as a hard cord pointing convexly downward. It is in contact with the spermatic cord, the ilioinguinal nerve, and the round ligament of the uterus.

The femoral vessels pass beneath it into Scarpas Triangle. Numerous nerve branches, like twigs of a tree, deep and superficial, springing from the lumbar, plexus are distributed widely to the adjacent muscles and tissues of the ligament. Also nerve branches and filaments from the sacral, coccygeal, and pudendal plexuses reach this structure. The region is like a huge nerve pathway of coursing nerve trunks, running like telegraph wires, thus serving as a distributing center.

The venous and arterial pathways, their main trunks, branches and ramifications are equally numerous and abundant in this region. The same can be expressed for the lymphatic structures of the area. The autonomic and vegetative nervous system through the sacral, abdominal and pelvic plexuses participate in the nerve supply.

Other sources of innervation should be mentioned: intercordal V, anterior, cutaneous nerves of the abdomen, lateral 3-11 thoracic, lateral cutaneous iliohypogastric, lateral cutaneous of 12th thoracic, anterior cutaneous X XI SXXth thoracic.

Blood Supply: Internal

Spermatic artery; middle sacral; and ovarian arteries. Venous drainage; deep iliac circumflex, left

spermatic vein, ascending lumbar vein, Lyphatics, parietal nodes, visceral nodes.

A clearer and more compact description of nerve, arterial, senous, and lymph supply to the external oblique and Poupart's ligament as given by Professor Paul G. Roofe, University of Kansas is as follows: *External oblique muscle, nerve supply* intercostales V—Xii (upper) iliohypogastricus—Th_5 and ilioinquinalis Th_{12} L_1 (lower). *Blood supply upper part:* Rami parietales—Aa intercostales (anterior rami—muscular rami) segmental. *Lower part:* A. epigastrica inferior—deep—A epigastrica superficialis—superficial *venous drainage upper part* vena intercostalis—muscular rami vena epigastrica superficialis. *Lower part:* vena epigastrica inferior —deep, vena epigastrica superficialis—superficial. *Lymph drainage* lower portion—inguinal lymph nodes upper portion—axillary Lymph Nodes. *Poupart's ligament nerve supply*—sensory only ilioinquinalis Th_{12}, L_1 *Blood supply* A. epigastrica inferior—deep A. epigastrica superficialis—superficial. *Venous drainage* vena epigastrica inferior—deep, vena epigastrica superficialis superficial *Lymph drainage* inguinal lymph nodes.

Also an excellent description of the same principle by J. Parsons Schaeffer, Jefferson College, professor of anatomy, Daniel Baugh Institute of Anatomy. "The nerve supply to the external rami from the lateral branches of the lower seven intercostal nerves and commonly by branches from the iliohypogastric. The rami or branches from the upper two or three of these nerves usually course on the external surface of the muscle while the remaining nerves extend on the deep surface, the cutaneous component parts of the nerves passing through the muscle toward the skin.

"It is interesting to note that the nerves of the external oblique take a course more transverse than do the fasciculi of the muscle. The nerves to the external oblique have a segmental distribution thus corresponding with the original segmental condition of the muscle. The external oblique is complex in its derivation.

"Although lymph capillaries have been demonstrated as present in the tendons of muscles," Schaeffer continues, "the presence of lymph capillaries in striated muscle is still a mooted question. True, Aagaard has described lymphatics extending along the intramuscular portions of tendons and from there to lymph capillaries around the individual muscle-fibres. Unfortunately, his observations, with reference to the presence of lymphatic capillaries within muscle fibre bundles of voluntary or striated muscle, still remain unconfirmed. Further researches are necessary. This, of course, does not mean that lymphatic vessels may not course through voluntary muscles in company with blood vessels. This is another matter.

"The external oblique receives muscular branches from a number of lumbar arteries. Likewise, muscular branches are distributed to the muscle from the lower intercostal arteries and from the musculophrenic artery (lateral terminal branch of the internal mammary).

"In addition, muscular branches are, doubtless, supplied from the deep circumflex iliac artery. Corresponding veins, of course, accompany the arteries."

Muscle spasm, tenderness, and rigidity of the abdominal muscles, due to numerous causes, is a well established phenomenon. Literature is teeming with detailed descriptions, facts, statistics, and scientific deductions. Nevertheless, spasm pain and tenderness, involving Poupart's ligament exclusively, has not been described anywhere. This, possibly so, because as a part of the external oblique, it is not considered as an anatomic unit, and has been neglected its deserved attention.

Spasm, tenderness, and pain of Poupart's ligament, may be due to: localized peritonitis, disease of the superficial cutaneous or deep nerves in the adjacent anatomy; disease of the sacral or lumbar vertebrae; intestinal conditions, appendicitis, cecitis, regional ileitis, tuberculosis of the intestines, colitis, ulcerative colitis, Meckel's diverticulum; disease of the male organs, orchitis, epidymitis, seminal vesiculitis and prostatic conditions, glandular conditions; tuberculosis, Hodgkins, and malignancy, disease of the female organs; ovarian cysts, salpingitis, ovaritis, and tubul pregnancy, rheumatic conditions, hyperinsulnism, ascites, abdominal tumors, muscular exertion and trauma, disease of the boney structures of the pelvis basin, diseases of the urinary system; cystitis, calculus of the bladder, kidney and ureter, toxemia, uremia, abscess formation, psoas abscess, volvulus, intususception, abdominal aneurism, malignant growths, neuritis, phlebitis, skin conditions as pruritis, dermatitis, and herpes zoster.

Excluding the above mentioned forest of causes, there is a limited number of conditions where Poupart's structure is involved alone without any demonstrable primary condition. Here the ligament is taut, very tender, spastic, and prominent. There is no fever, or blood changes to indicate bacterial activity. The most painstaking effort to discover the causative factor was unsuccessful.

The onset is usually insidious, beginning with moderate pain, increasing in intensity as time progresses. Some cases begin more abruptly, with spasm, pain, and tenderness localized at the ligament. The pain may be exquisite to gentle palpation. In many cases, the symptoms are very slight, a mild discomfort lasting for a long time, and may subside very gradually without causing any acute manifestations.

The patient is careful on walking, guarding the affected side. The pain may radiate to the groin, testes, labiae, or buttocks. Occasionally there is pain in the ligament during defecation, bending, and working. In a few cases there is a moderate distention and tympanites on the affected side. In one case an abscess developed and was drained. Also in one case there were streaks of redness lasting a few days.

The condition yields favorably to therapeusis, rest, hot applications in the form of flaxseed poultices, hot fomentations, or a hot water bottle.

Drugs: codein, aspirin, phenacetin, belladonna, trarsentin, and profenyl are very useful. Strapping with adhesive over the entire ligament, pulling upwards to the spine. Sometimes a suspensory bag was helpful, and kept the bowels soft to avoid straining. A rich vitamin diet was encouraged.

Only those cases where the primary cause could not be discovered are discussed here. A meager 10 percent is mentioned, with 90 percent left out. Males predominate nine to one over females. Lean people of the laborious class predominated; one percent had lues. Malnutrition was very evident, with many giving a history of rickets in childhood, and deficient diets, and also defective dentition. Neuritis, rheumatism, exposure to cold, laborious effort, and alcoholism were definite findings in the histories of many.

Case Reports

Case 1: H. W., male, colored, age 62. Pain L. R. Q., five months duration. A history of lues was obtained although at present his blood and spinal were negative. Poupart's ligament was extremely tender, tense. On pressure this pain radiated to the right testicle, groin, and he also felt a similar suffering over the left ligament. He was given codein, salicylates, hot applications, rest, a suspensory bag, and multivitamines. His condition cleared up in less than one week.

Case 2: S. B., male, 58, grocer. This patient was well nourished, but presented a history of lumbar pain for years, with this pain appearing at Poupart's ligament a short time ago. He complained of inability to lift, could not walk fast, and was compelled to hold his hand over the L. R. Q. to avoid jarring and pain. He was treated with codein, salicylates, and belladonna, which relieved him.

Case 3: Mrs. S. G., age 55. She had had several pelvic operations, was nervous, and complained of pain and tension over Poupart's. All physical findings were normal. The physician told her that this condition was due to adhesions. The ligament was tender, spastic, more pronounced toward the pelvic bone. Hot baths, rest, and adjusting a proper corset helped her a great deal.

Case 4: O. L., male, coal dealer, age 54. He gave a history of a chronic peptic ulcer. He explained that he had to work hard recently, lifting, shoveling, because of shortage of help. He had pain, tenderness and redness over Poupart's. Hot flaxseed poultices were applied, and an abscess formed, which was evacuated with the clearing up of the condition.

Case 5: M. J., male, aged 61. The physical examination of this lean hustling factory worker revealed a mild glycosturia, mitral stenosis and right direct inguinal hernia. He complained of pain in the lower R. Q. Upon palpation Poupart's ligament was painful, tense, and streaked red. An ice bag was applied, rest and large doses of salicylates and codein were administered, with very good results.

Case 6: P. S., a strong, muscular laborer, age 41. He arrived with a history of chronic alcoholism. The pain in Poupart's ligament came suddenly several years ago, recurring at intervals. During the past two weeks the condition become intolerable. He yielded to rest and medication.

Case 7: S. B., a tall, strappy athlete, age 39. This man had a negative history and physical findings. His pain at Poupart's came suddenly, which was found tense hard and tender, making him wince on touch. Large doses of medication were given, flaxseed poultices, and the condition cleared in one week.

Case 8: G. H., a physician, age 81. The doctor had developed gradual pain in Poupart's ligament, while taking a stroll. He said that he never felt this way previously, and neither has he ever seen a similar condition in his long and active practice. He had a blood pressure 170/90. His condition yielded slowly to medication.

Case 9: Mrs. F. B., 26, tall, lean, pregnant 7½ months. She had much pain over both Poupart ligaments, subsiding in recumbent position. Her condition improved on rest, medication, and disappeared completely after delivery.

Case 10: H. M., age 30, with a negative history except that he was an excessive consumer of alcohol, developed tenderness over right Poupart ligament. His dentition was very poor. Medication, intense vitamin administered, rest, and dental work relieved him.

Here are mentioned only cases where the condition was primary, excluding carefully all other pathology that may be responsible, otherwise, the number would be much greater. It is more frequent in man than woman, middle age predominating. It is also more prevalent in lean, muscular, laborious individuals. Many were undernourished, living a great deal on carbohydrates, anemic, and poor dental hygiene. It is mostly located on the right side, but may be bilateral.

This condition is not mentioned in any medical writings here or abroad, at least not to the knowledge of the writer. Whether this condition should be called Poupartitis, or Poupart syndrome is not important. Of course, Poupart's ligament is part of the external oblique, and it possibly should be described as a malady affecting that muscle. There were no histologic studies made, therefore, the pathology is obscure.

However, these cases are a reality, and should be mentioned as such in physical findings. The possibility that it is a reflex from other structural irritation of pathology, is logical. As mentioned, the region is teeming with nerve, arterial, venous, and lymphatic complexities, it is prone to display abnormal manifestations. It may also result from stress and strain due to pelvic abnormalities.

It is the exceptional, the rare, that fascinates, and stimulates contemplation.

235 Fifth Ave.

A REVIEW OF 1500 OBSTETRIC CASES

EDMUND LISSACK, B.Sc., M. D.
Concordia, Mo.

In presenting a series of 1500 obstetric cases, this author wishes to emphasize what can be accomplished by proper prenatal, natal and postnatal care and that proper, clean and aseptic deliveries can be performed in the lowliest homes, as well as in the best equipped hospital delivery rooms.

Childbirth, in its original design, is a normal physiologic function. The process of childbirth does not differ in the shack, in the tenement or in the best equipped home or hospital. Every pregnant woman is entitled to and should receive systematic care, supervision and treatment, from early pregnancy, through labor and the puerperium, until she is restored, as nearly as possible, to normal health.

The place of delivery, in this series, ranged from the best hospital environment, with a trained staff of assistants, down through good homes with good nurses, to the lowest and dirtiest surroundings that could well be imagined.

All the cases in this series were handled as follows: Each case received a complete physical examination before the confinement; from one to fifteen prenatal visits; proper aseptic natal care; and six weeks postnatal care, plus the final examination at six weeks postpartum.

This leads us to the question of prenatal care and when it should really begin. The answer is, that it begins in the antenatal period, with the prevention of disease and prematurity. For instance, the prevention of rickets in infancy is of great importance because rickets causes obstetric complications in later life.

In the care of an obstetric case, one should inquire into the history of past diseases and, of course, ascertain facts which are of obstetric importance. A complete physical examination should be made at the first visit. This should include a visualization of the cervix with a speculum.

The obstetrician thus learns to know his patient and her physical peculiarities as well as those of her family, and the knowledge so gained may be invaluable later. At this first visit the patient is also prepared for any test or procedure deemed necessary at a future visit. Her confidence is gained, she loses dread of future visits and is impressed by the careful survey of her qualifications for motherhood.

Subsequent continuous supervision is essential and should include routine observations of the weight, pulse, temperature, respirations, urine, and certain objective and subjective symptoms. This plan has been this doctor's procedure for many years. Here are the results obtained in 1500 maternity cases that have come under his supervision.

Of these 1500 confinements, 1509 babies were born. Boys numbered 597; girls 912. Of these 1500 confinements 927 were primiparas and 573 multiparas.

Regarding presentations, it was found that of the 1500 deliveries, 1425 were vertex; 30 face; 30 breech; 6 shoulder; and 6 brow.

Normal deliveries occurred 1335 times; instruments were used 144 times; version was performed 15 times; and cesarean sections numbered 6.

In 954 confinements no lacerations whatever occurred. Episiotomy was performed 351 times. There were 179 first degree and 16 second degree lacerations. In about 60 percent of all primiparas no lacerations occurred.

Analgesia and Anesthesia

Modern obstetrics provides many analgesics and anesthetics for use in labor and each have their reputed relative merits; but, before discussing this subject, a few definitions may be helpful. Anesthesia is a state of total or partial loss of all sensation, while analgesia is a state of absence of sensibility to pain. Patients rendered amnesic may experience pain, but it will soon be forgotten. Ether, chloroform and nitrous-oxide with oxygen were used as general anesthetics in this series. Morphine and demerol were used as analgesics.

During the first stage and most of the second stage, analgesic drugs suffice to alleviate pain, but imminent birth necessitates the induction of complete surgical anesthesia by inhalation.

First Stage Analgesia

Morphine stands supreme as an analgesic drug. Its use in labor is indeed rational if the attendant dangers can be minimized. It was the analgesic of choice in home deliveries before the event of demerol. Fetal asphyxia was not often encountered when it was given several hours before the second stage of labor began. It was never given when the second stage was imminent. Morphine was used 452 times.

Demerol is the most recent addition to the obstetric analgesics and has already made a definite place for itself. Like morphine, it is truly an analgesic drug and its use has a rational basis.

In none of the patients so far observed were excitement, disorientation, or irrationality encountered. No postpartum depression, confusion, or "hangover" occurred. During the third stage of labor, there was no increase in bleeding or no atony of the uterus.

No babies delivered of the mother who received demerol showed any persistent cyanosis, evidence of narcosis, or otherwise merited the term "sleepy baby". It was used 364 times.

Second Stage Anesthesia

An anesthetic was advised in practically all cases. Chloroform has enjoyed first rank and proved satisfactory in experienced hands. It is, however, used less and less lately, on account of the possible danger of late chloroform poisoning. The danger is particularly great in certain toxic conditions in which the liver is more or less primarily involved.

Chloroform has the narrowest margin of safety in respect to the production of respiratory paralysis. It was extensively used and would be the ideal anesthetic because of the small amount required, the almost immediate analgesic effect and the not unpleasant odor, but for the above mentioned dangers. The drug was found to be very useful and safe. However, in the second stage, especially for analgesia when the second stage was short, it was often the only pain relieving drug used during the entire labor if prolonged or deep anesthesia was not needed.

Ether is much slower in its action than chloroform, but it is also far less dangerous. It cannot compare with chloroform as an inhalation for analgesia. It can be used in the home by lay assistants, under direction, with safety.

For complete anesthesia in the home, ether is the only safe agent, especially if one must trust its administration to inexperienced persons. It is the generally accepted safe anesthetic for delivery by instruments and practically indispensable in the relaxation it produces for version.

Nitrous oxide with oxygen has many advantages. It is very slightly toxic, acts rapidly, is easy to control, produces less postanesthetic nausea and stimulates pains, with consequent shortening of labor. Its stage of analgesia allows cooperation of the patient while suffering little or no pain, and it may be given over a long period of time.

In a few instances nitrous oxide with oxygen was used as an analgesic in the first stage and continued as an anesthetic through the second stage. This minimized the need of other drugs and satisfactory results were obtained with its use.

An ideally "painless labor" is possible but is safe only under exceptional conditions and places undue burdens and responsibility on the obstetrician. We do not try for it. Satisfactory forgetfulness is obtainable and suitable analgesia is available in every case.

Ether was used 672 times; chloroform 684 times; nitrous oxide with oxygen 120 times. In 144 cases no anesthetic whatever was used, because of its refusal by 30 percent of these patients. In the remaining number there was no opportunity to administer an anesthetic, either because arriving after the baby was born or too late to administer an anesthetic.

Whenever possible, a complete anesthetic at the moment of delivery was given, in order to increase the relaxation of the perineum and to reduce the chances of serious lacerations. Ironing out the soft parts manually, with sterile soap as a lubricant, was a great help in preventing lacerations.

Postpartum Care

Immediately after delivery of the placenta, each patient in this series received 1 cc. of obstetrical pituitrin, followed immediately by 1 cc. of ergotrate, 1/320 grs. or 1 cc. of aseptic ergot intramuscularly. An ergot preparation by mouth was repeated every three hours until eight doses had been given. A constant watch was kept on the uterus, for several hours after delivery, for signs of hemorrhage.

A careful inspection was made in each patient for any possible laceration of the cervix, vagina and perineum. Lacerations were immediately repaired and the after care of the stitches consisted of a sterile pitcher douche, sterile pads as often as they became soiled and after each defication and urination, and the stitches painted with three percent mercurochrome. An abdominal binder was applied immediately after delivery of the placenta.

Complications

Infant mortality: Only babies stillborn or who lived less than one month are considered. Of 1509 babies, 21 lived less than 30 days. Of this number 12 were stillborn, 6 premature infants and 3 nonviable miscarriages.

Stillbirths: Stillbirths make up an important obstetric problem. Two classes may be considered: Those that die before the onset of labor and those infants who lose their lives during labor. Some of the former could probably be saved by proper prenatal care. The lives of the latter are not saved by prenatal care but by better natal care. On analysis of these stillborn babies it was found that three were due to toxic mothers (eclampsia), three to placenta previa, and six to prolonged labor.

Prematurity: Of these six premature infants, two died within a week and the other four were successfully raised with the aid of an incubator.

Miscarriages: Three nonviable miscarriages, at about 22 weeks, followed operations for appendicitis.

Threatened abortion: This constitutes a very important phase of prenatal care. Of this series, nine women gave signs and symptoms of threatened abortion. They were all immediately placed at rest in bed, with doses of morphine and progesterone administered, and the children were successfully carried to a period of viability. Three patients were primiparas and the other six were multiparas.

Rh factor: During the past few years the Rh factor has been widely publicized. It is now generally accepted that Rh typing, in addition to the routine drawing of blood for serologic tests, is essential in order to insure maximum safety in blood transfusions.

In obstetrics, the infant mortality due to erythroblastosis or hemolytic anemia of the newborn can be decreased by utilizing the information acquired from the routine Rh typing. In this series, of 99Rh factor determinations, there were 10 Rh negative mothers. The remaining 89 were Rh positive. The husband of one Rh positive woman was Rh negative.

Toxemia: Three cases of eclampsia occurred. One case had many convulsions before aid was summoned. A light anesthetic was given for manual dilatation and delivery. The child was stillborn. The mother died of shock twelve hours later. Cesarean section was considered the best method of delivery in the other two cases.

Gallbladder: Gallbladder disease responded splendidly to medication and no surgical interference was

necessary during pregnancy. This affection occurred several times.

Appendix: Three cases of appendicitis had to be operated upon, resulting in miscarriages.

Urinary tract: Diseases of the urinary tract were seen often. Cystitis and pyelitis were rather frequently observed. These cases responded well to treatment but, in order to obtain the best results, treatments must begin early in the pregnancy and be continued to as complete a cure as possible before the termination of the pregnancy.

Oral infection: Oral infection were common. Proper dental care during the prenatal period eliminated many untoward effects. In this respect we are extremely fortunate in this community, having splendid dental cooperation.

Retroverted uterus: This condition was corrected three times.

Pelvis: Pelvic deformity is extremely rare in this community. Recognition of small pelves and oversized babies, as well as careful histories of previous labors, are of great assistance in determining beforehand the conduct of a case.

By means of a routine pelvic X-ray examination at about the eighth month, more information concerning the size and conformation of the pelvis, the size, form and position of the fetus in utero, plus the relationship that the head bears to the pelvic canal can be obtained, than might possibly be ascertained by means of repeated painstaking examinations over a period of months. This was illustrated in 151 examinations in this series.

The welfare of the mother is quite essential. It is important to know what can be done for her. Good natal care can be secured only by proper prenatal care and supervision. The procedure described provides an opportunity to make proper and adequate preparations for the care of the mother and child during the confinement and the postnatal period.

Detection and eradication of abnormal conditions in the pregnant woman will ultimately benefit both her and the child. Careful instruction, especially in printed form, of the mother as regards the mode of life, personal hygiene and the care of the breasts and genitals, is quite essential.

Multiple Births

Three sets of twins and one set of triplets are reported in this series. The twins were unioval, with one chorion, two amnions and one placenta. All were boys. The triplets were all girls.

Abnormal Deliveries

The following paragraphs briefly review a few of the abnormalities encountered during this series of deliveries.

Occipitoposterior: Among the difficulties encountered in obstetrics, there are few more potentially disastrous than the persistent occipitoposterior positions. Nearly 90 percent of primary posterior positions rotate and deliver as occipitoanterior and with these we are not concerned. The remaining 10 percent, comprising the persistent posteriors and those in which anterior rotation is arrested before completion, will all require aid. Three such cases were encountered in this series.

Face presentation: Eighteen of the 30 face presentations were delivered normally and six with instruments. Six were persistent mentoposterior presentations. In these six cases the face failed to engage at the inlet and conversion into a vertex presentation was called for, followed by forceps. Podalic version was performed in six cases.

Breech presentation: Breech presentations numbered 30, and they were largely "simple breech" cases with legs flexed on the anterior surface of the body. Three deliveries were complicated with stricture of the uterus, due to a contraction of Bandl's ring, which caused considerable delay in the delivery of the after-coming head.

Shoulder presentation: Shoulder presentations occurred six times. Podalic version was performed in all cases.

Brow presentation: There were six brow presentations, three right fronto-positions, showing a tendency towards spontaneous conversion by deflection to a right mentoposterior position. The three other brow presentations were left frontoanterior. One of these cases was slow and tedious in delivering. The head was thoroughly impacted and it was decided to leave it alone. The baby was small and was expelled normally in due time.

Prolapsed cord: Prolapse of the cord occurred three times.

Placenta previa: There were six cases of placenta previa.

Podalic version: There were 15 podalic versions; three for vertex positions complicated with a prolapse of the cord; six for the correction of shoulder presentations; and six for face presentations.

Cesarean section: Six cesarean sections were performed. Two were considered the best method of delivery in cases of eclampsia complicated by undilated and rigid cervices. Three sections were done for placenta previa. The other indication was pelvic contraction in which the conjugate vera measured 7.5 centimeters.

This series is unmarred by a single case of puerperal infection. It has been aptly stated that, regardless of the surroundings in which a baby is born, if good, reasonable care is used and Nature is allowed to do her part, the odds are decidedly in favor of a satisfactory outcome.

No postpartum hemorrhage occurred in this series. Since an ergot preparation was given in every case, immediately after the delivery of the placenta, no hemorrhages were encountered.

Of injuries to the baby, other than slight bruising from the instruments, etc., there was one case of cephalhematoma. This swelling was on the right parietal bone and was limited by the suture. It appeared on the first day and its cause was attributed to pressure. It was soft but without fluctuation, and existed for fifteen days, it did not break down and suppurate, but was gradually absorbed. Compression was used.

Childbearing should be a healthgiving and not a healthimpairing function. Greatly improved care has very materially reduced gynecological pathology. Episiotomy and prophylactic forceps delivery; immediate repair of damaged lacerated cervices; and avoidance of long protracted labors with damaging operative deliveries by a safe cesarean section are some of the measures that have been beneficial to the partuient mother.

Good obstetrics is always prophylactic gynecology. Because of this the lot of womankind should be healthier and happier.

1009 Main Street

SOME RECENT CONCEPTS IN THE CHEMOTHERAPY OF MALIGNANCIES

ALFRED A. MESSER,
New York, N. Y.

The trend in modern cancer research toward explanation of the basic physiological and chemical changes in cancer has given impetus to a prolonged study of the possible uses of chemical compounds in the treatment of this disease. It has been found that there are many properties similar in all cancerous tissue regardless of the etiology, histogenesis, or species in which it is found.

The more malignant the cancer becomes, the more does it deviate from the normal adult tissue from which it is derived, and the greater its resemblance to undifferentiated embryonic tissue.

Therefore it was reasoned that if a fundamental knowledge of the chemical and physiological properties of the tumor were obtained, effective chemotherapy could be instituted. However, the work on drugs has far surpassed the basic research and the result is that today we have certain compounds that will adversely affect the growth of tumors, but the mechanism of their action is not completely understood.

It is the purpose of this paper to review briefly some of the agents used in the clinics today, and to present some of the available data on their possible modes of action.

The most recent and promising of the chemotherapeutic agents are a group of compounds derived from the poison gases. During chemical research in this country in World War II, the possibility of enemy use of poison gas was considered, and therefore attempts were made to isolate the action of these agents on fundamental cell processes. In the course of this work, it was noted that not only were the gases contact vesicants, but that they also exhibited cytotoxic action. Moreover, susceptibility of cellular elements to the effect of the mustards was related to their proliferative activity. Thus the formed elements of the blood and the gastrointestinal mucosa were the first tissues affected. These factors suggested the use of nitrogen mustards in treating selective malignancies (1).

Accordingly, nitrogen mustard, in the form of its water-soluble salt methyl bis beta chloroethylamine hydrochloride, received clinical trial in the treatment of lymphomas. Of the results, as reported in one of the early summaries by Alpert and Peterson (2), "Some were spectacular, others fairly good and the remainder poor."

Study of the treated tissue showed changes similar to those obtained by use of radiation, and many of the early successes afforded relief where this and all other known types of therapy had failed. The obvious implications stirred great interest in the mustard compounds (3).

Metabolic studies in vivo and in vitro showed that the addition of a mustard reduced the oxygen consumption and also suppressed aerobic and anaerobic glycolysis of glucose. There was inactivation of essential enzyme systems, particularly those concerned with the transfer of phosphates.

In the vascular system, there resulted in experimental animals a demonstrable lymphopenia, granulocytopenia, and a slight anemia, due both to a destruction of the formed elements of the blood, and an inhibition of hematopoiesis. In the gastrointestinal tract there is produced nausea and vomiting, with the loss of fluid and electrolyte from the body.

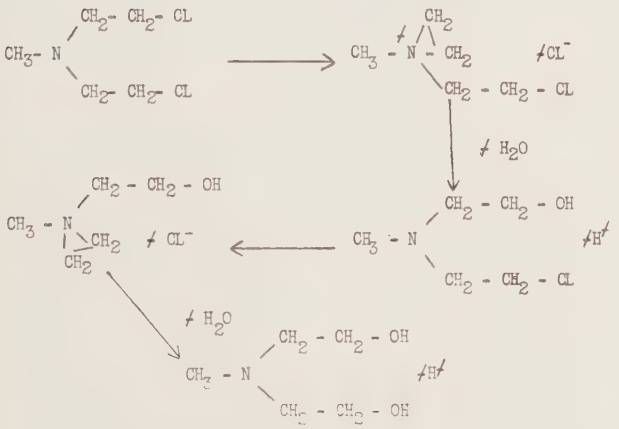
Evidence also indicates that the mustard in some way poisons the renal tubule cell so that there is cellular and extracellular spaces. If the dosage of nitrogen mustard is severe enough, then we have a complete upset of the body fluid and electrolyte balance, and eventually there is circulatory collapse similar to that seen in shock and death of the animal (1). The use of nitrogen mustard in human patients must therefore be very carefully controlled.

An insight to the possible action of methyl bisamine may be gained by a brief examination of the chemical picture shown in Figure 1.

The cyclic ring formed is very reactive and although in ordinary physiological solutions it reacts with water, in the presence of biologically-active substances, the reaction with water is negligible (4).

Rather, the reaction may be with amino acids, organic and inorganic phosphorus compounds, purines and pyrimidines, and perhaps also with carboxyl and amino groups of proteins such as hemoglobin, albumin, insulin, gelatin, and various enzymes.

Fig. 1



Finally the effects of the mustard in regard to direct action on the chromosomes must be considered. In microscopic examination of cells treated with the agent, changes in the chromosomal configuration have been noted in addition to inhibition of cell division. The severity of the response is related to the amount of nitrogen mustard administered. A mild dose can cause arrest of cell division in the resting stage, but if cells are in the various stages of the mitotic cycle, they will complete division.

Many competent investigators believe the action of nitrogen mustard is a specific one on the nucleus of the cell, and studies on chromosomal changes in Drosophila is cited as evidence (5). If large doses are given in both sexes, fertility is suppressed. However, if the adult male is treated with doses not great enough to affect fertility, the genetic analysis of the X- chromosomes shows an increased number of sex-linked lethal factors, and an increased number of translocations and inversions in the chromosomal structure. This action of the nitrogen mustards duplicates the action of radiation, and this duplication is observed with no other chemical agent.

Urethane: There have been recent reports in the British literature of the extensive use of urethane (NH_2-CO-O-C_2H_5) for treatment of cancer. Although the agent was administered to patients with all types of malignancies, the most favorable results were obtained in the treatment of leukemias. There was a rapid decline of the white cell count to within normal limits, an increase in the hemoglobin level, and a tendency for the spleen and other lymphoid organs to return to a somewhat normal size (6).

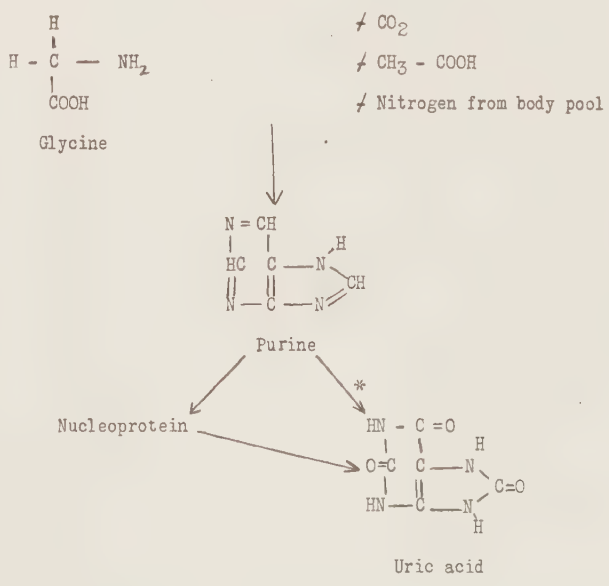
Various attempts have been made to explain the adverse effects of urethane on tumors on the basis of its action with physiological cell components. It should be stated here that the study of possible modes of action of urethane, as well as of other chemotherapeutic agents, is of importance because of their remarkable similarity to radiation therapy. Most observers believe that there must be some inherent metabolic or cellular mechanism, as yet unidentified, which both the radiation and chemical therapy can repair or replace.

Two basic interpretations of the action of urethane have been advanced. The drug has been found effective in inhibiting the oxidation of cytochrome-b by causing the formation of an undissociable complex composed of dehydrogenase, substrate, and the cytochrome. Thus the latter is made inaccessible to that portion of the system reacting with oxygen, and the overall cell respiration picture is upset.

Of further interest in this connection is the possible relationship between the cell respiration and the maintenance of normal mitosis. When the cell respiration is depressed by the action of urethane, abnormal mitotic figures appear (8).

A second possibility in the action of urethane is based on the recent work of Plentl and Schoenheimer showing that in the synthesis of nucleoproteins, neither purines nor pyrimidines are utilized, and therefore these substances must be built up from smaller molecules in the nucleus (7). The action of urethane might then be an interference in the normal synthesis of nucleoproteins, an effect that would convert the purines into uric acid. This may be represented graphically as is done in Figure 2.

Fig. 2



* Possible action of Urethane

Haddow and Sexton (8) inquire also as to whether:

> ". . . the primary action of urethane is upon the growth mechanism or upon the differentiation processes—to the extent that these are separable. That the latter is more likely is indicated from the marked histological and cytological changes in the Walker rat carcinoma which are produced by urethane. . . . Hence, these effects may be regarded as due to a characteristic property of urethane, and it is perhaps reasonable to suspect that the drug may act on growth primarily through the processes of maturation, and in leukemia, by tending to remedy some deficiency in these processes."

Radioactive isotopes: The treatment of malignancies with radioactive isotopes is an extension of radiation therapy. The assumption is made here that the tumor cell still retains many of the properties of the normal cell of its respective tissue and the cell cannot distinguish between the inert and the radioactive substance in the absorption of those elements for which it has an affinity. Thus in the treatment of thyroid carcinoma, a "selective irradiation" of the gland is obtained by the introduction of radioactive iodine (9).

Similar usage is made of radioactive phosphorus in the treatment of a number of lymphomas. The radioactive phosphorus—P^{32}—is made by bombarding the inert element with deuterons in a cyclotron. It differs from the ordinary stable phosphorus only in the fact that it is radioactive. It otherwise has the same physiological and chemical properties as the parent substance and is capable of penetrating the tissue to a depth of 0.7 cm. In order that a relatively high concentration of the radioactive element in the tissue be reached, the amount of stable phosphorus consumed at the same time must be kept at a minimum (10).

Those tissues which have a high phosphorus content and which metabolize the element rapidly, will selectively take up larger concentrations of the substance than will the normal tissue. Since the radioactive isotope is built into nucleoproteins just as is ordinary phosphorus, those cells which are multiplying at the fastest rate use proportionately more of the P^{32} than do cells which are proliferating more slowly, and as a result relatively high concentrations of radioactivity are reached in the malignant tissue.

It should be pointed out that the preferential uptake is not great enough to avoid normal tissue damage. In leukemia, for instance, one cannot administer enough radioactive phosphorus to destroy all abnormal cells without at the same time destroying normal erythroid and megakaryocytic tissue.

Hormone therapy: The successful use of hormones in the treatment of tumors of reproductive organs affords a striking example of the correlation between basic endocrine mechanisms and clinical medicine. Huggins and Clark (11) showed that the administration of estrogens caused an inhibition of the prostatic secretions, and at the same time, an atrophy of the normal prostatic epithelium.

Conversely, androgens in the male stimulated both growth and secretions in that organ. These results suggested that if normal prostatic tissue could be inhibited by neutralization of the androgenic factors, it should likewise be possible to produce atrophy of malignant tissue by either administering estrogens, or by surgical castration.

This work is further based on the assumption that the malignant cell still retains some of the characteristics of the normal tissue from which it is derived. With estrogen therapy, which causes pituitary inhibition and testicular atrophy, the equivalent of "chemical castration" is obtained (12). The variety of response obtained here may be explained in terms of the degree of undifferentiation that the abnormal cell has attained.

At present chemotherapy is used extensively and successfully for prostatic carcinomas, and analogous use of androgens for breast tumors in the female has been described (14). Not enough data on the latter treatment is as yet available. In many cases of hormone therapy the body responds to the treatment with a marked recurrence of the tumor. This may be a physiological compensation by increased activity of accessory androgen centers in the body, such as the adrenal cortex.

As might be expected with the use of estrogens in the treatment of prostatic carcinoma, there is an increase in femininity in the male, with frequent "hot flashes" and painful swelling of the breasts. Similarly in the use of androgens in the female, a tendency toward masculine characteristics is noted.

Toxin therapy: There are many reports in the literature of the favorable influence of extracts of bacteria and parasites in treatment of cancer. The first observation of this was reported as early as 1867 in Germany when the regression of a cancer was noted following a spontaneous attack of erysipelas (12). In this country Coley prepared a filtrate from various strains of bacteria, and used this extract—the so-called Coley's toxin—in the successful treatment of abnormal growths (15).

More recently Shear and his collaborators at the National Cancer Institute in Washington have prepared a bacterial polysaccharide which has been used clinically in the treatment of certain sarcomas, and has produced hemorrhagic and necrotizing effects at the site of the tumor. Radiation and other therapy had proved ineffective. A limiting factor in the use of the polysaccharide is that slight doses produce fever and conditions seen in shock (16).

From Russia there has come the report that marked inhibition and regression of tumors was mediated by a parasitic endotoxin. This endotoxin, prepared by Roskin, was extracted from cultures of *Trypanosoma cruzi* and when injected into experimental animals and patients with tumors, caused local necrosis and degeneration at the site of the tumor (17).

Attempts to duplicate this work are now under way by a group in Philadelphia, but no conclusive results have been obtained to date (18).

Other agents: The general discussion of the substances listed above is not intended to convey the impression that these are the only compounds used

successfully in chemotherapy of cancer. The literature contains many scattered reports of substances that have shown either specific or general palliative properties. Thus benzene and arsenite have been used with some success in the treatment of leukemias, as have colchicine, sodium cacodylate, and other compounds.

Recently, Snapper (20) has presented data on the successful treatment of multiple myeloma with stilbamidine and pentamidine. The development of more effective agents awaits a more complete investigation of the basic physiological mechanisms of both the normal cell and the cancer cell.

Discussion

As indicated in the consideration of the drugs above, our knowledge of the basic cell mechanisms to date is so meager that chemotherapy still consists largely of administering a drug and noting its action. It should be pointed out that in the treatment of tumors, surgery remains the only *permanent* cure. Both radiation and chemical therapy are palliative measures at best, and there is invariably a recurrence of the abnormal growth.

The extensive use of chemotherapeutic agents in clinical medicine, as well as in experimental animals raised the problem as to why, with the demonstrable damage to hemopoietic tissues, and the decrease in lymphocytes and granulocytes, there was no marked increase in ordinary infection. This observation is particularly apropos if the modern concept of lymphocytic origin of the antibodies is assumed. As yet there is no adequate explanation.

To study the possible influence of nitrogen mustard on the antibody response, a number of independent experiments were performed (21, 19). It was found that nitrogen mustard will not increase the antibody titre of the circulating blood. In animals, in which an anamnestic response to specific antigens could be obtained, the prior treatment of these animals with nitrogen mustard delayed or inhibited this response. A further study showed that with pretreatment or concurrent administration of nitrogen mustard when typhoid antigen is used, the antibody response to the latter is suppressed.

Since the same results were noted in adrenalectomized animals, it may be assumed that the nitrogen mustard acts directly on the lymphoid tissue, and its effects are not mediated through the adrenal cortex (19).

The ability of many substances to act on the leukemic cell, both in etiology and in therapy, points to this element as one of the basic approaches to an understanding of cancer. In recent epidemiological studies, for example, it was shown that the incidence of leukemia among radiologists is roughly ten times greater than among practitioners in the other fields (22). The incidence of leukemia among physicians in general is 1.7 times greater than that noted among the overall population (23).

Similarly in therapy, the leukemic cell is specifically affected by many agents, such as urethane and nitrogen mustards.

Summary and Conclusions

The application of a number of drugs in the chemotherapy of malignancies has been considered. In many cases, these agents have afforded relief where all other known therapy has failed. Some of the basic physiological mechanisms which might explain the therapeutic action of these drugs has also been considered.

The localization of action of many chemical agents at the sites of tumors is cited by many investigators as further evidence for the belief that a *specific* factor is present which is instrumental in causing the malignancy, and which in palliative treatment, is neutralized.

Bibliography

1. GILMAN, A. and PHILIPS, F. S.: The biological actions and therapeutic applications of the B-chloroethyl amines and sulfides. *Science*, 103: 409 (1946).
2. ALPERT, L. K. and PETERSON, S. S.: The use of nitrogen mustard in the treatment of lymphomata. *Bull. U. S. Army Med. Dept.* 7: 187 (1947).
3. JACOBSON, L. O., SPURR, C. L., BARRON, E. S. G., SMITH, T., LUSHBAUGH, C. and DICK, G. F.: Nitrogen mustard therapy; Studies of the effect of methyl bis (B-chloroethyl) amine hydrochloride on neoplastic diseases and allied disorders of the hemopoietic system. *Jour. Am. Med. Assn.* 132: 263 (1946).
4. GOLUMBIC, C., FRUTON, J. S. and BERGMANN, MAX: Chemical reactions of the nitrogen mustard gases. I. The transformation of methyl-bis (B-chloroethyl) Amine in water. *Jour. Organic Chem.* 11: 518 (1946).
5. AUERBACH, C., ROBSON, J. M. and CARR, J. G.: The chemical production of mutations. *Science*, 105: 243 (1947).
6. PATERSON, E., HADDOW, A., THOMAS, I. A., and WATKINSON, J. M.: Leukemia treated with urethane compared with deep X-ray therapy. *Lancet* 1: 677 (1946).
7. PLENTL, A. A. and SCHOENHEIMER, R.: Studies in metabolism of purines and pyrimidines by means of isotopic nitrogen. *Jour. Biol. Chem.* 153: 203 (1944).
8. HADDOW, A. and SEXTON, W. A.: Influence of carbamic esters (urethanes) on experimental animal tumours. *Nature*, 157: 500 (1946).
9. SEIDLIN, S. M., MARINELLI, L. D. and OSKRY, E.: Radioactive iodine therapy. Effect on functioning metastases of adenocarcinoma of the thyroid. *Jour. Am. Med. Assn.* 132: 838 (1946).
10. REINHARD, E. H., MOORE, C. V., BIERBAUM, O. S., MOORE, S., and KAMEN, M. D.: Radioactive phosphorus as a therapeutic agent. A review of the literature. *Jour. Lab. and Clin. Med.* 31: 107 (1946).
11. HUGGINS, C. and CLARK, P. J.: Quantitative studies on prostatic secretion: effect of castration and of estrogen injection on normal and on hyperplastic prostate glands of dogs. *Jour. Exper. Med.* 72: 747 (1940).
12. GREENSTEIN, J. P.: Biochemistry of cancer. New York, *Academic Press, Inc.* (1947). pp. 155-161.
13. SULLIVAN, T. J., GUTMAN, E. B., and GUTMAN, A. B.: Theory and application of serum "acid" phosphatase determination in metastasizing prostatic carcinoma; early effects of castration. *Jour. Urol.* 48: 426 (1942).
14. HERRMANN, J. B., and ADAIR, F. E.: The effect of testosterone propionate on carcinoma of the female breast with soft tissue metastases. *Jour. Clin. Endocrin.* 6: 769 (1946).
15. NAUTS, H. C., SWIFT, W. E., COLEY, B. L.: The treatment of malignant tumors by bacterial toxins as developed by the late WILLIAM B. COLEY, M. D., reviewed in the light of modern research. *Cancer Research.* 6: 205 (1946).

16. REIMANN, S. P.: Chapter on growth in: *Annual Review of Physiology,* Vol. IX, Stanford University P. O., Calif. *Annual Reviews, Inc.* and the American Physiological Society (1947).
17. ROSKIN, G.: Influence of protozoan infections upon transplanted cancer. *Amer. Rev. Sov. Med.* 4: 111 (1946).
18. HAUSCHKA, T. S., SAXE, L. H. JR. and BLAIR, M.: Trypanosoma cruzi in the treatment of mouse tumors. *Cancer Research,* In Press.
19. PHILIPS, F. S., HOPKINS, F. H. and FREEMAN, M. L. H.: Effect of tris (Beta-chloroethyl) Amine on antibody-production in goats. *Jour. Immun.* 55: 289 (1947).
20. SNAPPER, I.: Stilbamidine and pentamidine in multiple myeloma. *Jour. Am. Med. Assn.* 133: 157 (1947).
21. SPURR, C. L.: Influence of nitrogen mustards on the antibody response. *Proc. Soc. Exp. Biol. and Med.* 64 (2): 259 (1947).
22. MARCH, H. C.: Leukemia in radiologists. *Radiology,* 43: 275 (1944).
23. HENSHAW, P. S. and HAWKINS, J. W.: Incidence of leukemia in physicians. *Jour. Nat. Cancer Inst.* 4: 339 (1944).

50 Haven Ave.

WINE: ITS USE IN HEALTH AND DISEASE*

CHARLES PIERRE MATHE, M. D., F. A. C. S.**
San Francisco, Calif.

"Wine is the most healthful and the most hygienic of all beverages" proclaimed Pasteur, discoverer of microorganisms. His scientific investigations that revolutionized the concept of infectious diseases owed their start to the study of the diseases of wine and beer.

The use of wine in health and disease is greatest in wine producing countries. In France, Italy, Germany (the Rhineland and Mosel), Chile, the Argentine and the United States (particularly California and New York), it is quite commonly consumed. Wine is of special interest to Californians because our state is the grape basket and the wine cellar of America.

In 1945, California produced 112,000,000 of the 120,000,000 gallons of wine made in the United States. In 1945, the national per capita consumption was 0.72 gallons, that of California 2.02 gallons.

Twenty percent of the wine made in California is locally consumed. The highest per capita consumption is that of France—40 gallons per year.

Our California wines have reaped the fruit of long, patient, honest effort on the part of our vintners. Julian Street, one of the world's great wine experts, gastronomist and epicure, recently stated: "Local California wines have improved amazingly." André Simon, president, Wine and Food Society, said at the time of his visit here in June, 1946, "California wines are very good indeed."

It is generally believed that wine excites the appetite, facilitates digestion and produces relaxation of the nervous system. Are these concepts based on folklore or can they be substantiated by scientific investigation? A number of physicians practicing in the wine producing region of California decided to provide the answer to this question. In San Francisco, 1938, they formed the Society of Medical Friends of Wine. The object of this unique medical society was, "to stimulate scientific research on wine, develop an understanding of its beneficial effect, and encourage an appreciation of the conviviality and good fellowship that are a part of the relaxed and deliberate manner of living that follows its proper use."

The Society, of which I had the honor of being the first president, works in conjunction with the Wine Advisory Board through the California State Department of Agriculture. Pertinent research projects regarding the medicinal, physiologic and nutritive value of wine have been carried out or are still under way. These consist of: (1) studies on the effects of wine in increasing the secretion of gastric juices, by Dr. E. Ogden at the Department of Physiology, University of California, (2) research on absorption of various alcoholic beverages, by Doctors Newman and Abramson, Stanford University School of Medicine, (3) analysis of vitamins in wine, by Dr. Agnes Fay Morgan and her associates in the Department of Home Economics, University of California, (4) a bibliography of the medical and chemical uses of wine, compiled under the guidance of Dr. Salvatore P. Lucia, University of California Medical School. Valuable data on the subject of wine have been collected by a research librarian, and this reference library is open to the medical public.

Other projects discontinued on account of the war are now being resumed in various institutions throughout the country. The food research laboratories of Long Island City, N. Y., have studied the value of red wine in the treatment of anemia. Curt Richter, Johns Hopkins University, Baltimore, is

* Read before the 39th annual meeting of the Pacific Association of Railway Surgeons, San Francisco, October 19, 1946.
** Chief Urologist, Southern Pacific General Hospital; Founding member of Society of the Medical Friends of Wine; Member, Wine Jury Golden Gate International Exposition, 1939.

investigating the manner in which wine may replace other food in the diet of experimental animals.

Wine, the living blood of the grape, has been used in health throughout the ages. The Bible is replete with references to wine and Ecclesiastes advises us to drink wine with a merry heart. St. Paul in all his wisdom admonished St. Timothy in the following words: "Timothy, beloved son of the faith, drink no longer water but use a little wine for thy stomach's sake and thine often infirmities." Homer sang its praises in his immortal masterpiece; Horace called it the drink of the gods. Pliny, Shakespeare, François Villon and innumerable other poets often refer to the friendliness of wine. It has been an inspiration to painters, sculptors, writers, musicians and physicians. Can all these persons who have contributed so much to civilization be wrong?

Wine is a living substance and is most efficacious when properly produced with minimum manipulation, without mixtures and additions and with minimum introduction of antiseptic substances. Pasteurization and introduction of antiseptic substances will preserve wine by preventing souring, yet these processes destroy its delicate flavor and bouquet. The minimal dosage of sulphur learned by the master vintner assures conservation of wine without destroying its fine taste.

Wine, which best acquires its age in wooden casks, and when bottled acquires bottle age, is subject to some seventeen diseases and undergoes changes at certain times of the year. The California white table wines are at their best in 3 to 5 years and the red wines reach their peak in from 5 to 9 years. Like all living substances some lots and individual bottles retain their vigor much longer than others.

Wine contains: water, alcohols, ethyl, propyl, butyl, hexyl, heptyl, grape sugar, calcium and iron tartrate, tartaric succinic and malic acid, fats, amines, ammonium salts, isobutylene, glycol, glycerine, ethers of caprilic, mucic, pelargonic, oenanthic acids, pectins, gums, tannin, coloring matter, proteins, peptones, xanthins, oxidizing and reducing enzymes, and vitamins B and C.

One can readily see that wine is a most complex substance having many medicinal properties and that it is subject to subtle changes which can alter its nature.

This communication shall not touch on the abuse of wine. Alcoholism resulting from intemperance is well known to be responsible for many deleterious effects on the body, such as vitamin B deficiency, gout, nervous disorders, etc. When used moderately, wine is of value, but when taken in greater than therapeutic doses, becomes quite toxic. This phenomenon holds true for all medicinal agents or drugs. We can eat and drink to kill ourselves as well as to sustain life and cure disease. It has been established that alcoholism is rare among individuals who regularly drink wine with their meals. Temperance, not abstinence, is the solution of the alcohol problem.

Use Of Wine In Health

The stimulating effect of aperitif wine is well known. It sharpens the appetite and facilitates digestion. It produces a feeling of well being which in turn has a beneficial effect on digestion.

Wine itself enhances the taste of food. A piece of striped bass tastes infinitely better when accompanied by a glass of dry white Riesling, Chablis or Sauternes. Roast beef, wild duck or a steak calls for the traditional red Burgundy or Bordeaux. However, individual preference may upset the fastidiousness that the gourmet claims for wine and its edible complements. The pleasure exhibited by a fishing companion is vividly recalled, who, after having followed the sport of Isaak Walton since the crack of dawn on a rough sea, relished at 8 a. m. a can of sardines with a bottle of claret.

Food Value Of Wine

The use of wine dates from the Stone Age, and was extensively used by the Egyptians, Greeks and Romans. It contains nutritive and non nutritive food elements. The nutritive elements are derived from the carbohydrate and protein content of the grape, and the non nutritive elements from the many minerals and vitamins B and C it contains.

The sugars of wine are easily assimilated and are stored as glycogen which are a source of caloric energy. These consist of dextrose, glucose, levulose and fructose. Dextrose in particular is quickly absorbed and is of protective value to all organs of the body. Connor and Chaikoff found that dextrose is the most important single factor in the prevention of fatty liver, which is the precursor of cirrhosis of the liver.

Alcohol contained in wine does not impede the rate of absorption of dextrose. Ninety five percent of the caloric energy of alcohol in wine is available for use. Richter demonstrated that rats will maintain normal health when 40 percent of the caloric intake is in the form of alcohol in wine, 10 to 13 percent in table wine and 19 to 20 percent in dessert wines. Therefore, alcohol in wine is a source of caloric energy.

Newman and Abramson have shown that the alcohol of wine with its higher buffer capacity is absorbed less rapidly than that of distilled liquors, Scotch and Bourbon whiskey, gin and alcohol. Thus, the high peak of blood alcohol concentration observed after ingestion of distilled liquors on an empty stomach is not reached after drinking wine. Southgate and others have shown that the peak blood level of alcohol is lower when wine is taken with the meal than when it is taken on the empty stomach.

Jolliffe pointed out that in ordinary diet when there is an increase in vitamin free calories there is a greater need for thiamin. Wine is the only common alcoholic beverage that contains proven quantities of vitamin B as well as small quantities of vitamin C.

Randoin, Baglioni and Morgan working independently found vitamins B and C in sufficient quantities in grape juice and wine to augment the daily vitamin intake. It is well known that vitamin content may be lost through heat, antiseptic agents,

freezing, etc. Vitamins B and C are found in greatest concentration in naturally produced wines and may be destroyed by excessive doses of sulphur products employed to kill organisms, by pasteurization and by other unnatural processes.

Yet measures must be taken to preserve wine. One of the best is the use of the minimal dosage of preservative sulphur, by employing sterilizing filtration preceded by cooling and by introduction of carbonic acid gas under pressure. When, in tasting a wine, it is found that the flavor of fresh grape juice is preserved, one may rest assured that the biological and hygienic properties, including vitamins, have been retained. Other food content of wine consists of purines, inulines, pectins, fats, tannin and glycerin. Although present in small amounts, these are of decided food value. The aromatic organic esters that lead to the fine bouquet and pleasant aroma of wine have defied chemical analysis. Yet the flow of gastric juice is increased in appreciating these elusive substances.

Amerine and Joslyn found seven of the most essential mineral elements in wine, viz: sodium, potassium, calcium, magnesium, chloride, phosphorus and iron which are so necessary to maintain human and animal life.

Saywell pointed out that 80 percent of the iron encountered in wine is in the reduced ferrous form which is easily assimilated and remains stable even after long periods of aging. Factors aiding its absorption are a proper diet and adequate production of acid by the stomach. Fishbein, Calvin and Heumann observed a rise in hemoglobin after daily ingestion of grape juice. Therefore, the use of a moderate amount of wine at mealtime will supply iron to the deficient meal of the average American as well as build up the blood.

Action Of Wine Upon Digestive Organs

The value of wine in exciting the appetite and facilitating digestion has long been known. Beaumont and Bernard were the first investigators to study the effect of alcohol ingestion. Relaxation of the nervous system produced by wine plays a decided role and adds to the complexity of the problem. Winsor and Stronger noted increase in the flow of salivary juice for a period of 10 minutes after the ordinary ingestion of wine and secretion returned to a basal level in from one-half hour to an hour.

Introduction of alcohol directly into the stomach did not augment the flow of saliva. Increased salivary secretion is due to the reflex action of taste and to direct action on nerve endings of the buccal mucosa.

Ptyalin, the digestive starch enzyme found in saliva, appeared to be unaffected by the presence of alcohol contained in table wines. Light wines have no irritative effect on the mucosa of the mouth and esophagus.

Incidentally, it has been shown that the glossitis and stomatitis of the heavy drinker is due not to the irritating effect of alcohol but to vitamin deficiency. Increased secretion of salivary juice is caused by direct action on glandular tissue, by reflex action of the nerve endings in the mouth and by psychic influences.

Effects Of Wine On The Stomach

The ingestion of alcoholic solutions varying from 7 to 20 percent augments the flow of gastric secretion, according to the investigations of many physiologists (Bernard, Saito, Babkin, Dragstedt, Barlow and others). Ogden showed that after moderate ingestion (120 to 180 cc.) of white table wine, the volume of gastric juice was substantially increased in normal individuals. Wine has the advantage over plain alcohol by the fact that it contains natural fruit salts, tartrates, phosphates and other constituents. These act as buffer salts, preventing appreciable rise in acid strength which results in a tempered increase in the flow of gastric juice over a longer period of time. This is more in harmony with natural digestion.

The fermenting action of gastric juices is hampered by a concentration of alcohol greater than 10 percent (Claude Bernard). Concentrations of alcohol higher than 20 percent cause definite irritation of the gastric mucosa accompanied by the production of mucus which is secreted in order to protect the mucosa of the stomach (Barlow). Wine administered by rectum and by vein has the same effect as that taken by mouth, increased flow of gastric secretion. Eyland and Marcard recommend wine in the treatment of hyposthenic dyspepsia and hypochlorhydria.

The effect of wine on gastric secretion is due to immediate contact with gastric mucosa, to direct action on the secreting cells through diffusion from the blood stream, to reflex stimulation through the vagus nerve—the sensory pathway being through the afferent nerves of the mouth and pharynx—and to reducing worry and nervous tension.

Effect Of Wine On Intestines, Liver And Pancreas

Over the years clinicians have observed that wine is of value as an antispasmodic of the small intestine, relieving intestinal colic. This observation is borne out by the experiments of Kyno who found that dilute concentration of alcohol lessened the activity of smooth muscle of the intestine.

The beneficial effect of wine on the large intestine in relieving diarrhea has long been known. Seamen looked forward to arriving at ports where they could purchase red wine which, because of its high tannin content, would soon check the diarrhea commonly acquired in the tropics. Weissenbach and Faroy recommend wine in the treatment of mucous colitis, diarrhea, and spastic constipation. Wine has been found to be an effective pancreatic stimulant when administered either by mouth or by rectum.

In 1886 Kuwschinski demonstrated increased flow of pancreatic juice after the administration of alcohol. The increased flow is accompanied by proportionately augmented output of pancreatic enzymes. After the alcohol in wine has reached the intestines it becomes relatively dilute due to its mixture with chyle; this low concentration does not hamper enzyme activity. In large doses wine inhibits the flow of biliary secretion; in small doses it acts as an accelerator (Salant).

Okada made observations on the hourly flow of bile from biliary fistulae following ingestion of 200 cc. of 10 percent solution of alcohol, and noted 25 percent increase in the hourly flow of bile. The average intake of 350 to 400 cc. of wine with the ordinary meal will increase biliary flow and enhance pancreatic fat enzyme action, facilitating the digestion of a fatty meal. Wines of high dextrose content should have an anticirrhotic property because of the role played by dextrose in the prevention of fatty degeneration of the liver. Leary noted fewer gallstones in individuals who had been users of alcohol.

Wine is contraindicated in patients presenting ulcers of the stomach and duodenum, either during or between attacks. When taken regularly with the meal, however, the relaxation it provides may do much to reduce the nervous factors that play such a dominant role in the production of gastric ulcer. Wine also is contraindicated in hyperacidity of the stomach, in acute pancreatitis and in patients in whom the ingestion is followed by allergic manifestations.

Action Of Wine On The Kidneys

In describing the disease that bears his name, Bright in 1827, considered the abuse of alcoholic beverages as a causative factor in the production of nephritis. Fishberg reported that he was unable to find any greater incidence of nephritis in patients who died of delirium tremens than in those who succumbed from accidental causes. In articles written on hypertension and nephritis, other investigators have borne out this contention.

Very little of the alcohol absorbed by the intestinal tract is secreted by the kidneys; as little as 1.2 to 1.6 percent in the first two hours after ingestion of a large dose (Miles). Haggard and Greenberg found that only 2.4 to 4.3 percent of the alcohol ingested was secreted by the kidneys in 16 hours. It would appear from the foregoing that there should be little irritative effect on the kidneys, ureters and bladder from the moderate use of wine.

Clinical experience shows that increased intake of alcoholic beverages, including wine, may cause congestion of an already enlarged hyperthyroid prostate resulting in acute retention. Wine has a decided diuretic effect, and diuresis is more pronounced in patients with renal insufficiency due to hypertension than in normal subjects (John).

Bastedo ascribes this action to secondary dilatation of the renal arterioles, permitting a greater flow of blood to the glomeruli; this would result in more abundant urinary output due to increased availability of oxygen to the glomerular cells. Mrak and Fessler have shown that the natural fruit salts present in wine are a decided factor in promoting diuresis. The buffer salts it contains prevent the acidosis which follows ingestion of alcohol.

Component natural tartrates and phosphates in wine render the urine more alkaline and increase alkaline ash.

Saywell noted an elevation in the pH of the urine ranging from 0.8 to 1.2 pH units after ingestion of grapes and grape products. In addition to reduced urinary acidity an increase in alkaline reserve above normal was observed.

Action Of Wine On The Cardiovascular System

Brandy, which has been called the "life of wine," has been known to relieve the pain associated with angina pectoris. Heberden in 1772, White in 1938 and many other clinicians noted the beneficial effects on anginal pain of small amounts of brandy, and recommended its use.

Stockton and Bishop concluded that relief of pain was due to vasodilatation of the coronary arteries. Eylaud recommends the use of wine in heart disease, particularly in compensated cases and in those presenting a moderate degree of decompensation. He feels that wine increases the output of the heart. The vasodilatation of the peripheral blood vessels is responsible for the feeling of warmth following the use of wine. This phenomenon has been verified by the scientific work of Dickson, Hare, Hunt and Starling. Cook and Brown noted improvement in sufferers from thrombo-angiitis obliterans, which they attributed to increased circulation and rise in skin temperature resulting in relief of pain and even healing of visible ulcerous lesions.

Kootataladse isolated an amine in fermented grape juice in dilutions of 1:500,000 which increased the coronary flow and doubled the output of the isolated mammalian heart.

Many clinicians have observed that coronary thrombosis occurs less frequently in persons using alcoholic beverages moderately (Cabot, Master and others). The incidence of coronary disease is greater in Mohammedans, who are known abstainers.

Leary observes that the incidence of arteriosclerosis is less than those who consume moderate amounts of alcohol, particularly in patients suffering from diabetes. He feels that the solubility of blood cholesterol is greater in dilute solutions of alcohol.

Wilder found that diabetics suffering from disturbed cholesterol metabolism, when given wine therapeutically are less prone to develop arteriosclerosis than those who do not receive alcohol. Most clinicians feel that moderate use of wine has little effect on blood pressure (Lieb and Cabot). Intemperate consumption of wine as well as other alcoholic beverages frequently results in depression of blood pressure. McDowall believes the use of alcohol in therapeutic doses reduces venous pressure.

Action Of Wine On The Respiratory System

Wine in moderate doses has little effect upon pulmonary physiology. It may be absorbed and excreted by the lungs without adverse effect on lung tissue. There has been much controversy over the use of wine and other alcoholic beverages in the treatment of acute respiratory diseases, particularly pneumonia.

There is no question that wine possesses no destructive power on invading bacteria. Capps and Coleman, Weeks and others demonstrated a higher mortality among patients receiving alcohol in quantity during the acute phase of pneumonia than in a control group.

Soresi, however, gave wine by proctoclysis to a large number of patients suffering from pneumonia with very gratifying results. He found that it was of benefit because of its caloric value and cerebral effects, and that it exerted no deleterious influence on blood corpuscles or urinary constituents.

Wine has been used to advantage intravenously in the treatment of pulmonary abscess. The effect of alcohol in acute respiratory infections is doubtful except for its sedative action; in this sense wine may be more beneficial than a power synthetic sedative.

There is no doubt that the judicious use of wine during the convalescent period is of great value because it improves the appetite and promotes a general feeling of well being. It is also of benefit in wasting diseases like tuberculosis in which, in addition to its stomachic and euphoric effect, it induces peaceful sleep.

Use Of Wine In Diabetes Mellitus

It has been estimated that 2 percent of the population of the United States is affected with diabetes. Wine plays a prominent part in the diet of the diabetic today, as it has during the pre-insulin period. It is true that in the United States it lost some favor as a therapeutic agent during prohibition; but in recent years it has regained its position as a source of food alcohol in the treatment of diabetics.

Wine taken in prescribed quantities with the meal serves as an excellent source of caloric intake—75 to 90 calories per 100 cc. in table wines and 140 to 165 calories per 100 cc. in dessert varieties. Alcohol contained in wine resembles a carbohydrate because it contains carbon, oxygen and hydrogen and burns like sugar; yet it cannot be converted into sugar in the body. For this reason it is included in the diet of the diabetic.

Atwater and Benedict demonstrated that the alcohol present in wine is a source of kinetic energy either in the form of heat or of muscular work and that it also protects body fat and protein.

Benedict and Torok concluded that wine enables the diabetic to burn carbohydrate with less sugar excretion and less acetonuria. Many investigators, notably Diner, Kolta, Soula and Baisset, noted a decrease in the sugar level of diabetics after ingestion of small amounts of alcohol. Likewise Tennet found that the blood sugar level in normal individuals is not increased by moderate intakes of wine.

The inclusion of wine in the diabetic diet has been recommended by many clinicians—Joslin, Conybeare, Moffit, Lucia and a host of others.

Use Of Wine In Infectious Diseases

In the last century wine was used in the treatment of infectious diseases. In 1877 Anstie said that it toned up the circulation, reduced fever through relaxation of skin arterioles, provoked a feeling of well being, acted as a source of fluid to the exsanguinated, stimulated the exhausted heart and provided a sedative for the delirious.

Sir William Osler stated: "I should be sorry to give up the use of wine in severe form of enteric and pneumonic fever." Fantus observed that alcohol is oxidized more readily in the patient presenting fever than in the same individual at normal body temperature, and that its food value is of particular importance in patients in whom digestion is impaired. This glycogen sparing effect should be of great value in relieving the overburdened liver of the debilitated patient suffering from fever.

In France it has long been observed that the typhoid fever rate was lower in regions in which wine is more available. Professor Tanon is of the opinion that a given amount of wine mixed with an equal part of water is an excellent disinfectant. Widal and Sabrozés demonstrated that one cc. of white wine would kill 90 percent of typhoid bacilli, vibrion cholérique and the colon bacillus in an equal amount of culture, and that red wine is less efficacious than white.

In 1925, when there was occasion to travel through Italy, an elderly aunt who had lived through the Franco-Prussian war admonished me to drink wine rather than water and to take 30 cg. of quinine a day. The trip was made without acquiring malaria nor the troublesome infectious diarrhea so common at that time.

As a result of the efficient work of the United States Department of Public Health, typhoid in this country is practically non-existent. We are not obliged to take wine with the meal here in order to prevent typhoid fever. The use of wine, however, will prevent many forms of food poisoning due to infectious intestinal organisms so commonly present in oysters, clams, fruits and vegetables.

Use Of Wine In Old Age

Through the ages, wine has been of great value to the old. It has been rightfully termed the "milk of the elderly person." It is a source of ready energy requiring minimal metabolic effort on the part of the body. In the person with advancing arteriosclerosis accompanied by nervousness, dyspepsia, indigestion and dehydration, the ingestion of small amounts of wine is indeed of great benefit.

Wine increases the appetite, acts as a diuretic, produces vasodilatation and relaxes the nervous system. It has been found to dispel the fears and anxiety so common to old age without acting as a cortical stimulant.

The judicious use of a small amount of wine at bedtime will promote normal sleep and eliminate the need to administer barbiturates. In addition, it supplies acid to the achlorhydric stomach of the older person, as well as providing secretory stimulation so necessary for the proper digestion of food. It supplies additional fluid to the dehydrated aged individual in whom fluid intake is often a troublesome problem. The iron present in natural wines is an active agent in combating hypochromic anemia, not infrequent in the aged. Wine facilitates gastrocolic reflexes, stimulating evacuation.

Leary stressed the role of alcohol in keeping the body cholesterol in solution, thus decreasing the deposition of cholesterol in the intima of the blood vessels. It is a well known fact that loss of arterial

tone is due to deposits of calcium found in atheromatous plaques in the blood vessel wall itself. This process, although not reversed, should be retarded by the ingestion of wine.

Taken in moderation wine is a decided tonic, the ingestion of which is followed by a glowing and genial spirit so necessary to the aged.

Use of Wine as a Vehicle for Medication

Wine has been employed as a liquid vehicle for medicaments from time immemorial. Its use is more common in the countries in which it is produced. Medical chemists have learned that wine has peculiar advantages over other alcoholic bases used for the purpose of keeping relatively insoluble substances in solution. This is due to the mild acid reaction of wine ranging from pH 3.5 to 4.2 for dessert wines and pH 2.9 to 3.8 for table wines, because many drugs are more soluble in a slightly acid solution. In addition, there is a buffering action due to the presence of potassium and sodium in the form of tartrates and phosphates.

The successful use of white table wine extracts of belladonna leaf and colchicum in the treatment of Parkinson's disease and gout is due to this buffering action. Moreover, the aromatic organic esters and ethers provide a pleasant flavoring far superior to other foreign and synthetic extracts.

Unfortunately in the United States during prohibition 20 percent alcohol was substituted for white wine as a liquid vehicle for the above medicines. Wine is still used in France and Great Britain and many other countries in the preparation of medicines. In our country, however, the use of wine as a vehicle for vitamin B_1 and B complex, strychnine and calcium and sodium glycerophosphates has increased substantially in recent years.

At this point, attention should be called to a tonic which I have used with great success in the treatment of debility and nervousness noted in patients suffering from diseases of the urinary tract. It consists of phenobarbitol, strychnine, calcium and sodium glycerophosphate dissolved in sherry wine. It is time that sherry, port, white and red wines reappear in the United States pharmacopoeia. They were excluded coincidentally with the advent of national Prohibition and did not reappear with repeal of the anything but noble experiment.

Summary

This communication is a plea to the physicians of the Pacific Association of Railway Surgeons for a better understanding of the use of wine.

Here in California we produce some of the finest wines made in the Western Hemisphere, and it behooves us to learn about their physiological effects. Scientific investigation has supported the belief in its powers formerly attributed to folklore. We have no misconceptions as to its value; taken in therapeutic doses it is a source of food, improves the appetite, facilitates digestion, produces relaxation of the nervous system and enhances the sense of well being of the patient; ingested in toxic doses it causes great damage.

Temperance and not abstinence is the solution of the alcohol problem. Wine has its indications and contra-indications. Prescribed in proper therapeutic doses it is a great aid to the sick. When used in health it adds to the well-being of mankind.

Bibliography

1. AMERINE, M. A. and JOSLYN, M. A.: Commercial production of dessert wines. *Univ. of Calif. Coll. of Agric., Agric. Experiment Section, Bull.* 639, 1940.
2. ANSTIE, F. E.: On the uses of wines in health and disease. London, *Macmillan and Co.*, 1877.
3. ATWATER, W. O. and BENEDICT, F. G.: *Mem. Nat. Acad. Sci.* 8. 231, 1921.
4. BABKIN, B. P.: Die Aussere sekretion der Verdauungsdrusen. Berlin, Julius Springer, 1928.
5. BAGLIONI, S.: Le vin et le raison comme porteurs de Vitamines. dans l'alimentation ordinaire. *II Congres Nat. des Med. Amis des Vins de France*, 1937, 279.
6. BARLOW, O. W.: *Jour. Pharmacol. and Exper. Therap.* 56: 117, 1936.
7. BASTEDO, W. A.: Materia medica, pharmacology and therapeutics. 4th ed. Philadelphia, *W. B. Saunders Co.*, 1938. p. 399.
8. BEAUMONT, W.: Gastric juice and the physiology of digestion. A facsimile of the original by SIR WILLIAM OSLER. Cambridge, Harvard *University Press*, 1929.
9. BENEDICT, H. and TOROK, B.: Ztschr f. klin. Med 60: 329, 1906.
10. BERNARD, C.: Quoted by BABKIN, B. P. Die Aussere sekretion der Verdauungsdrusen. Berlin, Julius Springer, 1928.
11. BISHOP, L. F.: *MEDICAL RECORD* 100: 279, 1921.
12. BRIGHT, R.: Reports of medical cases. London, *Longman*, 1827. Vol. I, p. 70.
13. CABOT, R. L.: *Jour. Am. Med. Assn.* 43: 774, 1904.
14. CAPPS, J. A. and COLEMAN, G. H.: *Jour. Am. Med. Assn.* 80: 750, 1923.
15. CHAIKOFF, I.: *Amer. Jour. Path.* 14: 101, 1938.
16. CONNOR, C. L.: *Jour. Am. Med. Assn.* 112: 387, 1939.
17. CONYBEARE, J. J.: *Manual of diabetes.* London, 1935, p. 22.
18. COOK, E. N. and BROWN, G. E.: *Mayo Clinic, Proc. of Staff Meet.* 7: 449, 1932.
19. DINER, J.: *MEDICAL RECORD* 100: 273, 1921.
20. DIXON, W. E.: *Jour. Physiol.* 35: 346, 1906-7.
21. DRAGSTEDT, C. A.; GRAY, J. S.; LAWTON, A. H. and DE ARELLANO, R. M.: *Proc. Soc. Exper. Biol., N. Y.* 43: 26, 1940.
22. EYLAUD, M.: Projet de Codex oenothérapique. II Congrés des Méd. Amis des Vins de France, 1934, 25 au 29 octobre.
23. EYLAUD, M. and MARCARD, R.: Le Vin au point de vue hygiénique. IIIe Congrés International de la Vigne et du Vin a Rome, 1932, 23-30 october.
24. FISHBEIN, W., CALVIN, J. K., HEUMANN, J.: *Arch. Pediat.* 55: 42, 1938.
25. FISHBERG, A. M.: Hypertension and nephritis, 4th ed. Philadelphia *Lea and Febiger*, 1939. p. 609.
26. HAGGARD, H. W. and GREENBERG, L. A.: *Jour. Pharmacol.* 52: 150, 1934.
27. HARE, H. A.: A textbook of practical therapeutics. Philadelphia, *Lea and Febiger*, 1925.
28. HEBERDEN, W.: *Med. Trans. Royal Coll. of Physicians*, 2: 59, 1772.
29. HUNT, W. R.: *Mississippi Doctor* 16: 13, 1939.
30. JOHN, M.: *Ztschr f. xper. Path. u Therap.* 5: 579, 1908.
31. JOLLIFFE, N.: *Quart. Jour. Stud. Alc.* 1: 74, 1940.
32. JOSLIN, E. P.: Treatment of diabetes mellitus. 2d ed. Philadelphia. *Lea and Febiger*, 1917, p. 282.
33. KOLTA, E.: *Deutsch. Arch. klin. Med.* 175: 376, 1933.
34. KOOTATALADSE, T. G.: *Russ. Physiol. J.* 2: 1, 1919.
35. KUWSCHINSKI, P.: *Diss. st. Petersburg*, 532, 1888. Quoted by GIZELT, *A. Pflugers Arch. ges. Physiol.* 111: 620, 1906.
36. KYNO, Y.: *Arch. exper. Path. Pharmakol.* 74: 399, 1913; 77: 206, 1914.
37. LEARY, T.: *New Eng. Jour. Med.* 205: 231, 1931.
38. LIEB, C. C.: *Jour. Am. Med. Assn.* 64. 898, 1915.

39. LUCIA, S. P.: Wine health. *8th Annual Conf. Wine Institute,* June, 1941.
40. MASTER, A. M., DACK, S., JAFFE, L.: *Jour. Am. Med. Assn.* 109: 546, 1936.
41. MCDOWALL, R. J.: *Jour. Pharmacol. and Exper. Therap.* 25: 289, 1925.
42. MILES, W. R.: *Jour. Pharmacol.* 20: 265, 1922.
43. MOFFITT: Personal communication.
44. MORGAN, A. F., NOBLES, H. L., WIENS, A., MARCH, G. L. and WINKLER, A. J.: The B vitamin of California grape juices and wines. *Food Research* 4: 217, 1939.
45. NEWMAN, H. W. and ABRAMSON: Absorption of various alcoholic beverages; differing buffer capacity. *Science* 96: 43-4, 1942.
46. OGDEN, E.: The influence of wine on gastric acidity. *The Federation Proceedings,* Part II, Vol. 5, No. 1, p. 77.
47. OSLER, SIR WILLIAM. Quoted by WILLIAMS, E. H. *MEDICAL RECORD* 92: 666, 1917.
48. RANDOIN, LUCIE: Vitamines, Jus de Raisin et Vins. *IIe Congrés National dés Medecins amis de Vin de France.* October, 1943, p. 235. Recherches sur la valeur alimentaire des jus de raisins frais et des vins au point de vue de leur teneur en vitamines. *Bull. de la Soc. Scientifique d'Hygiene Alimentaire,* 1928, XVI. No. 10.
49. RICHERT, C. P.: *Quar. Jour. Stud. Alc.* 1: 650. 1941.
50. SALANT, W.: *Amer. Jour. Physiol.* 17: 408, 1906.
51. SARTO, S.: *Virchow's Arch.* 185: 524, 1906.
52. SAYWELL, L. G.: The effect of grapes and grape products on urinary acidity. *Jour. of Nutrition,* 1932, Vol. 5, No. 2.
53. SAYWELL, L. G. and CUNNINGHAM, B. B.: *Industrial and Engineering Chem. Anal. ed* 9: 67-69, 1937.
54. SORESI, A. L.: *MEDICAL RECORD* 141: 435, 1935.
55. SOUTHGATE, H. W. and CARTER, G.: *Brit. Med. Jour.* 1: 463, 1926.
56. SOULA, G. and BAISSET, M.: *II e Congrés National des Médecins Amis des Vins de France.* BEZIERS, E. 1935.
57. STOCKTON, C. G.: *MEDICAL RECORD* 100: 277, 1921.
58. TANNON: Quoted by EYLAUD and MARCARD.
59. TENNENT, D. M.: *Quart. Jour. Stud.* Alc. II: 263, 1941.
60. WEEKS, C. C.: Alcohol in medical practice. London, *H. K. Lewis and Co.* 1925.
61. WEISSENBACH, R. S. and FAROY, M.: *IVe Congres National des Medicins Amis des Vins de France.* Bordeaux, 1937.
62. WHITE, P. D.: Heart Disease, New York, *Macmillan* 1938, p. 616.
63. WIDAL and SABRAZES: Quoted by EYLAUD and MARCARD.
64. WILDER, R. M.: Alcohol and Man. New York, *Macmillan Co.* 1932, p. 154.
65. WINSOR, A. J. and STRONGIN, E. I.: *Jour. Exper. Psychol.* 16: 589, 1933.

450 Sutter Street

Parran's Federal Subsidization Plan Supported by ASTHO

Surgeon General Thomas Parran's plan for Federal Subsidization of medical students as a means of increasing our present supply of physicians was unanimously supported by the Association of State and Territorial Health Officers (ASTHO), as reported in a recent issue of, *Washington Report On The Medical Sciences.*

Keeping in view that this is an election year, it is generally conceded that this plan will attract support from the Capitol, since this proposed program caters to young men and women in low-income groups.

Federal scholarships in dentistry, nursing and "allied fields", as well as in medicine, should be instituted to remedy "the increasing inability of institutions and students to meet the costs of professional training," is also strongly advocated by the Association.

Under the Surgeon General's plan successful applicants who have been admitted to accredited undergraduate medical schools of their choice, consequently would be obligated to spend a month in Federal service for each month of scholarship or, at the Government's discretion, in State or local public health duties. Still another alternative, under discussion, is to assign such graduates to geographical areas most deficient in supply of physicians.

Before adjournment of their recent three day annual assembly, the public health officers acted upon a wide range of problems. The recommendations put forth by the association are the following: Federal aid to the states to expand and extend local public health services; Federal grants in aid to medical schools; absorption of the Children's Bureau's health activities by the United States Public Health Service, which, it is reported, has little chance of seeing development due to articulate opposition it would elicit from private organizations which want jurisdiction over maternal and child health matters retained by Children's Bureau.

ASTHO also asked for more loan-outs of USPHS personnel to the States; establishment of a coordinating committee on tuberculosis control with members representing American Public Health Association, National Tuberculosis Association, AMA, USPHS, and ASTHO.

The Association wants improvement of USPHS laboratory services, including provision of a national Salmonella typing center, supply of rare biologicals to public health and other laboratories and creation of a national virus and rickettsial identification center; relaxation of restrictions on lepers; renewed emphasis upon rabies prevention; continuation of Federal appropriations for the national school lunch program; and countrywide promotion of the nationwide policy promotion of applying sodium fluoride to children's teeth.

Editorials

Hospitals and Medical Education

It is no new thing, this matter of hospital training, but the opportunities offered to young medical men have never been sufficient to take care of all who would offer themselves for service. We are speaking now of in-training. The O. P. D. has long been the refuge of those who wish to expand their knowledge of clinical medicine, after beginning private practice and, occasionally, it has been a stepping stone to operating staff and ward work. It has not always been easy for medical schools to acquire admission of undergraduates to observe the bed-confined; for many hospitals found this to be an intrusion on privacy, and a sort of obstruction to nursing and attendance duties. Such privileges were usually obtained through a strong staff member who, after appointment to a medical school, as professor, could wield his influence and thus take his students on rounds.

Columbia University Medical School, situated in a great metropolis has long enjoyed such affiliations with certain hospitals, but quite recently these connections have been increased by three to provide better facilities still for medical education. The institutions are: the Mary Imogene Bassett Hospital, Cooperstown, N. Y.; the Institute for Crippled and Disabled in association with Bellevue; and St. Luke's, West 113th Street, Manhattan. Each of these hospitals will provide practical clinical training in the handling of patients and the management of disease.

Some one may be surprised at the mention of the Cooperstown institution because of its remoteness, or may question its "facilities". Dean Rappleye of the College of Physicians and Surgeons stated that this is one of the outstanding rural hospitals in the Eastern states. It was set up in 1927 to serve a medical group, and is headed by Dr. George M. Mackenzie of the class of 1913 at P. and S. He is assisted by a clinical staff of six associates. Several house officers and assistants are graduates of the Columbia Medical School. Dean Rappleye restates the well-known fact that the modern well-trained medical graduate with his background of laboratory and technical facilities of the best kind, will not migrate into rural districts unless he can have similar aids in carrying on his work. The same is true of nurses, technicians, *et al* to a lesser degree; for, in these days of demand they have great freedom of choice. The Bassett Hospital is very well equipped, and attracts to its doors a large clientele from the surrounding countryside.

It is good to know that an affiliation with the Institute for the Crippled and Disabled has been arranged so that this important work, now so much in the public eye can be studied at first hand intensively. It is, of course, a "specialty" in the best sense of that often abused word, and is based largely upon skills in management acquired in World War II which furnished so much "material" previously brushed aside. These "incurables" were looked upon as having little interest for the medical man since "nothing can be done for them." But Dr. Howard Rusk, Dr. Deaver and his associates have so well humanized rehabilitation that it now attracts psychologists, physiotherapists and surgeons who take pride in devising new plastic and other procedures for the relief of spasticities, pareses, and ailments previously neglected or only half-heartedly dealt with.

These patients are "in" for many months as a rule, and, therefore, can be studied intensively from every viewpoint. Moreover, they are likely to be very cooperative and to submit to almost any procedure which promises suggestion of relief. In Dean Rappleye's opinion, "Once the program is under way, there is no reason why we cannot train 200 or 300 physicians a year who will be able to go throughout the country and help some of the twenty-three million disabled people."

The Streptomycin Project

The American Trudeau Society recently set up a Streptomycin-Tuberculosis Project, an account of which is published in the American Review of Tuberculosis for August, 1947. President Dr. H. McLeod Riggins, New York, and Dr. H. Corwin Hinshaw, Mayo Clinic, chairman of the Therapy and Streptomycin Committees, have combined a report of their findings to date, setting forth what has been already accomplished with this new weapon against tuberculosis, and what is expected.

Objectives to be attained are concerned with the usefulness and limitations of streptomycin administered alone or in combination with some other antibacterial agent. Certain problems in bacteriology must be solved, particularly the resistance developed by tubercle bacilli when exposed to streptomycin.

We wish also to know whether the resistance alters favorably or otherwise the virulence of tubercle bacilli in their effect upon human tissues. In this connection we must find out why streptomycin

seems to have an affinity for both the vestibular and auditory branches of the eighth nerve.

Riggins thinks that specific immunologic forces may become depressed in certain cases for a longer or shorter time in the presence of streptomycin, and that this factor might explain relapses after earlier successes. It may be that certain strains of tubercle bacilli gain ascendancy whenever the immunologic forces are depressed.

In all infections there are at least two opposing factors: the virulence of the invader, and the resistance of the individual. Here, in these studies one must determine, if possible, what changes take place in the host, and what take place in the tubercle bacilli as a result of the presence of streptomycin. This will require experiments on animals and also upon humans who are willing to submit to clinical experimentation.

In setting up any clinical investigation, well trained technical workers are of great importance; they must know bacteriology, chemistry, particularly organic and biochemistry. Most important of all they must be acute observers so that no vital point shall be overlooked. We need to know much more about the tubercle bacillus, its life cycle, favorable or unfavorable conditions for propagation, the vitality of varying strains etc. Especially, do we wish to know why it finds human soil so favorable to its existence. It is important to study the effect of streptomycin on the tb. bacillus both in vitro and in vivo. This entails varying conditions and strengths both of enemy and host. All of this constitutes "basic research."

To date, the conclusions derived are: 1. That streptomycin has a striking therapeutic effect upon guinea pigs affected with tuberculosis. 2. In man, streptomycin is the first antibacterial "drug" to show promising results against both pulmonary and extra-pulmonary tbc. lesions. 3. It happens that at times streptomycin definitely lessens or prevents tubercle bacilli from growing, but unfortunately, this phenomenon is limited by time. However, time may be sufficient for the natural body defenses to overcome these organisms when they are depressed. Here, once more we have bacteriostatic action rather than annihilation of the invader. 4. Marked amelioration of symptoms are noted referable to tbc. infection; namely, reduced cough, diminished sputum, lowered fever, increased appetite, and general euphoria. 5. Surprising improvement is seen in apparently hopeless cases of miliary and meningeal tuberculosis with maintenance of improvement for one year or more. We combine our clinical observations of the ravages of tbc. in bones, joints, kidneys, bladder, intestinal tract and larynx, and find in many instances, surprising results.

The discouraging and disappointing phase is met when toxic conditions and other undesirable manifestations begin to appear, especially in the aural region. This brings us to the contraindications as determined up to this time by clinical experience.

Streptomycin should be denied to patients who are doing well under the conventional methods of care so long in use. This drug is expensive, not abundant, and should be used, preferably, in those cases which seem to be getting worse in spite of accepted methods of treatment. In vastly destructive lesions which are known to be hopeless, streptomycin is of little or no benefit. Neither optumum dosage, nor maximum duration of treatment (days or weeks) are as yet accurately determined. Small doses of streptomycin work well in the beginning, but may soon lose their efficacy. It is suggested that one or two grams daily be given, for from 42 to 120 days in selected cases of pulmonary tbc. Large doses are more immediately effective, but toxic effects are likely to be greater.

One should not lean too heavily upon streptomycin as against accepted methods which have been long in use. This drug is an adjunct to any other therapy at best. Food, regulation of work, play, sleep, rest and many other factors well known to all clinicians still maintain. Finally, we may fairly state that: In streptomycin we have a powerful but as yet not completely understood agent or weapon against tuberculosis. We must continue to study it faithfully and well for a long time to come, since it offers more than any other "specific" yet tried.

Liability of Employer for Its Physician's Malpractise

A mechanic in a shipbuilding factory and yards in Mississippi, while in the performance of his duties, had sustained an injury to his back. He reported it to his foreman, who directed him to report it to the clinic maintained by the employer at the plant, to which the employees were required to report whenever they were injured. A physician, member of the clinic's medical staff and employee of the shipbuilding corporation, examined him and said that in his opinion his injuries were not serious.

At that time, unknown to the mechanic, his back was broken. The physician directed him to continue his work, which was of a heavy character. Ever since, the mechanic suffered excruciating pain from this injury. He reported this to the clinic, but no x-rays were taken, although he requested that

this be done. No effort was made to diagnose his injury properly and correctly. Having a family to support, he went on working. A month later, in carrying a large bundle of metal through the shop, the weight shifted due to the weakness in his back and ruptured his groin. He reported this to the clinic where an ice cap was applied, and then he was told to return to work as he was not ruptured.

He obtained a leave of absence, and went to a hospital in Vicksburg, where an examination showed that his back was broken and that he was ruptured. He was operated upon and a brace applied, which he had to wear for more than six months. He then filed suit for damages against his employer, alleging negligence of defendant's medical staff in failing properly to examine and diagnose his injuries. A judgment for the defendant in the Federal District Court for Southern Mississippi was reversed by the Fifth Circuit Court of Appeals and the case remanded for further proceedings, for the following reasons:

The facts in the plaintiff's complaint were admitted and from these facts, the Circuit Court said, it was apparent that the plaintiff was injured by the negligence of the defendant's agents. The employer contended that an employer is not liable for the erroneous diagnosis or negligent treatment of an employee's ailment by one of its physicians, where the employer was not negligent in selecting the physician and had no knowledge of his incompetency, where the physician had a good reputation.

Such a rule, the court said, is not absolute in Mississippi, although in some circumstances the master is not liable for the negligence or unskillfulness of a physician employed by him, provided he has exercised due care in the selection of the physician.

The court presumed that the employer in this case established the clinic and employed the members of the medical staff for the employer's own ends and purposes, thereby constituting the physician in charge its agent. Reporting to the clinic was not optional to an injured employee. There was nothing to support an inference that the master undertook gratuitously to furnish the servant medical assistance. The fact that no charge was made against the employee, or fee paid, for the doctor's services was not controlling.

As to the physician who examined the plaintiff and instructed him to return to work, but to refrain from lifting heavy loads for the time being, it was held that the doctrine of respondent superior applied. The appellate court knew of no public policy against the application of this doctrine to the vocation of a physician. "Physicians and surgeons," the court said, in conclusion, "in undertaking the duties of their profession, impliedly warrant that they are possessed of the requisite skill, learning and technical training to do the work required of them. The personal liability of the doctor must not be confused with that of his employer. The doctor's liability remains the same, whether or not his employer is also liable.

"The principal is responsible for the tort of his agent, not because the former has done wrong, but because the law so declares as a matter of public policy. There is no more reason to except employers of physicians from the doctrine of respondent superior than there is to except employers of other highly skilled persons who perform technical services requiring discretion. Whether the doctor was acting for any other than himself when he committed the tort, and if so for whom, are questions of fact unless the facts are undisputed and conflicting reasonable inferences may not fairly be drawn therefrom." Knox vs. Ingalls Shipbuilding Corporation, 158 F. 2d 973.

The terms of the affiliation give to Columbia a free hand to set up the "policy" and to formulate and direct the proposed program. Dr. Frank E. Stinchfield, associate in Surgery at the P. and S., will be chief of orthopedic surgery and select his own staff of co-workers.

As for the arrangement with St. Luke's, the present "affiliation" merely strengthens and formalizes a set-up which has been existent for years. The new plan works out a schedule for 24 medical students to serve their clinical training period at the hospital. Dr. John H. Keating of the class of 1917 at P. and S. will head this group, assisted by his own staff men who will instruct and will also supervise student work. Dr. Keating is president of the St. Luke's medical board. Both internes and resident physicians will continue to be appointed as heretofore by the hospital.

What Is Physical Medicine?

The annual report of the Baruch Committee on Physical Medicine for the period from April 1, 1945 to December 31, 1946 has just come to this desk. Although the activities in various medical centers throughout the country are described, we are obliged to limit our review chiefly to what is being done in New York.

Very soon after his discharge from the Army, Dr. Howard A. Rusk was appointed chief of the Department of Rehabilitation and Physical Medicine, New York University with quarters in Bellevue Hospital. He is being ably assisted by Dr.

George G. Deaver who is charged with setting up and developing a "program" as a major department of the College of Medicine. Both didactic and clinical instruction will be given to medical students not only, but educators, psychologists, physiotherapists, vocational guidance teachers, and other qualified persons who do not hold a degree in medicine are to be "trained" insofar as facilities permit. Thus "the third phase of medical care" as Dr. Rusk puts it, must guide the patient from bed back to a job.

At this time, the Department of Physical Medicine has two wards and eighty patients. It aims to assist all other departments in the hospital to meet the needs of the handicapped. The first step is to offer consultation and to set down the cause, diagnosis and kind of disability on a "form." Then the extent of disability, the range of bodily motion and strength are recorded by a therapist. One needs to know what the patient can do with hands, feet, general body mobility and self-care. Upon this we have a basis for formulating a "plan" or program of action. Teachers are not limited to the use of physical therapy alone, but must instruct in left-hand writing, crutch walking, psychosocial values and the *savoir faire* of daily living. This is being done both in wards and special treatment rooms. The ultimate object is to condition every disabled person so that he can get the greatest possible satisfaction out of life in spite of his handicap.

There are roughly some 23,000,000 handicapped persons in the United States, 97 percent of whom can be brought back into community life where they are wholly or partially self-supporting and in no sense "outsiders." This pays off in health, happiness, opportunity and productivity.

World War II had its great griefs, but an indirect benefit derived from the devoted and faithful service of the medical profession and its non-medical personnel is being passed from the *blessés* who sacrificed their bodies for the cause, to those who never got into uniform, but who have suffered injuries and diseases in civilian life. Our military hospitals have given new impetus and new methods for the care and rehabilitation of the disabled soldier, a desideratum which the report declares has been woefully lacking in civilian hospitals, especially as to economic adjustment, vocational guidance, orientation, and "uplift" for the life beyond the bed.

Since this is quite a new prospect, more and more trained leaders are needed in physical medicine. We have heard much of biochemistry. Very good indeed, but we need more study of biophysics, especially in pre-clinical courses in medicine. Dr. Alan Gregg, medical director of the Rockefeller Foundation, expresses the fervent hope that "biophysics may soon be recognized as the brother of biochemistry."

Technology in medicine is not only little understood; it is misunderstood. The public idea of research, is a bedside inspiration, a quick recourse to the laboratory, a few experiments, and a resultant great discovery. But medical research is carried on in thousands of remote places where an investigator may be hard at work on some such problem as the colors seen in butterflies! Somewhere, sometime, this published report may fit in with the work done by others in a related field, out of which a theory or a process may be evolved. New techniques and new usage of known physical agents are now much in evidence. The war stimulated research in physiology which was aided by a study of physical phenomena so that we now have new diagnostic devices such as the electronic stethoscope, the electroencephalograph and the psychogalvanic reflexometer.

Let us consider chest diseases for example. Thoracic surgery has reached a high pinnacle of perfection, but what of the post-operative, restorative function? The program calls for physical and educational reconditioning, occupational therapy and recreation. Shoulder exercises help to prevent contractures and limitation of motion. These are both active and passive, but must be taught by someone in authority, or more harm than good may result. Breathing exercises bring about contractions of accessory respiratory muscles, and contractions of inspiratory muscles during strong forced breathing. Radiant heat or hot packs may be necessary preceding exercises, especially if there is muscular soreness.

Amputeés are always a hard group to benefit. First there is the making and fitting of a satisfactory prosthesis acceptable to the user. Then there must be vocational training, mental orientation, and optimism. No patient should be routinely discharged from the amputation division until he has been well studied and given every opportunity to learn how to live a life as normal as his condition permits. This is an undertaking which demands more than most of us have to offer. The training of such a teacher is long and difficult, but the reward in personal satisfaction is very great. Love of humanity is the first requisite.

* * *

Another American who has had a disease named after him is James Nevins Hyde, born in Connecticut in 1840. He was the pioneer dermatologist of Chicago, having begun the practice of the specialty there in 1873. The condition which has become *Hyde's disease* was first described by Hardaway, but Hyde gave the condition its name of Prurigo nodularis.

News Items

Reception Services Ousted in VA Hospitals.—Dr. Paul R. Hawley has announced that reception services in Veterans Administration hospitals are being abolished in order to speed active medical treatment of veteran patients.

This new inovation stipulates that all general medical and surgical will be admitted directly into active treatment wards, where their case histories, necessary x-rays and other routine examinations will be made. These functions were conducted by the reception services pending assignment of patients to treatment wards.

Patients entering tuberculosis hospitals will enter diagnostic and classification units where they will be put to bed regardless of past diagnosis or apparent status of physical wellbeing. Therefore, the doctor can study temperature, pulse, and respiration while the patient is resting.

"Doctors Orders" Has Debut on Yankee Network.—"Doctors Orders", the newest coop program on the Yankee network, produced by Radio Production, Providence, recently made its first appearance. This program presents a dramatic presentation which is followed by an interview with a "home town" doctor who discusses the topic presented on that program.

It is reported that among the reasons responsible for this program's success is the down-to-earth manner in which the home town doctors talk to the listening audience on problems of health and disease.

Association of Interns and Medical Students Annual Convention Held in Chicago.—The Association of Interns and Medical Students conducted its annual convention at the Chicago Professional Colleges of the University of Illinois. Open sessions were devoted to addresses and symposia on the subjects of medical education and student welfare, interne and resident welfare and education, extension of medical care, medical economics and international health organization. The featured panel discussion dealt with the question of discrimination.

Other features of the convention included several exhibits, a prize-winning medical film, and a joint session with the American Advancement of Science on the subject of atomic medicine.

Red Cross News Shorts.—China's aversion to nurses' white uniforms is clearly understandable being that white is the color traditionally associated with death. This problem was solved by American Red Cross personnel by dyeing uniforms blue and sewing red crosses on them for nurses' identification.

It can be noted that a recent Texas law requires all school bus drivers to have Red Cross Standard and Advanced First Aid Training. Numerous communities and states have laws requiring such training also for firemen and policemen.

Further news reveal that Home Service in Red Cross chapters provided approximately 12 million dollars for financial assistance to servicemen, veterans, and their dependents for the last fiscal year.

Chronic Illness on the Increase.—In a recent issue of *Survey Midmonthly,* a writer pointed out that our nation's present two million cases of chronic illness will be doubled in the next 33 years. Skyrocketing relief costs is of primary concern to social planners who show more than half of the chronically ill are persons below 64 years old.

Geist Contributes Funds for Swimming Pool.—The installation of a swimming pool in the Institute of Rehabilitation and Physical Medicine, which will be part of the new University section of the New York University-Bellevue Medical Center, has been made possible through the $50,000 gift from the Irving Geist Foundation. The therapeutic pool was presented in the name of Irving Geist, Mrs. Geist and John B. and Kenneth L. Geist, their sons.

Essay Award on Agenda for Mississippi Valley Society's Meeting.—A cash prize of $100 will be offered by the Mississippi Valley Medical Society for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine at its 13th annual meeting which will be held in Springfield, Ill., September 29, 30 and October 1.

Eligible contestants are those persons who are members of the American Medical Association, and who are residents of the United States. For full information as to how these manuscripts should be presented to the eighth annual essay contest one should write to Dr. Harold Swanberg, secretary, Mississippi Valley Medical Society, 209-224 W. C. U. Building, Quincy, Ill.

Blue Cross Announces Most Recent Membership Status.—According to a most recent report of the Blue Cross Commission of the American Hospital Association, the Blue Cross Plans in the United States and Canada had a total membership of 28,833,795 on October 1. New York City has the largest net growth for the third quarter of this year with a gain of 76,602 new members. Over 19 percent of the total population of the United States are enrolled in this service.

Hadassah Leader To Study Medical Care in Palestine.—Mrs. A. P. Schoolman, New York City, member of the national board of Hadassah (The Women's Zionist Organization of America) left for Palestine recently. She will "blueprint" education, settlement, vocational training, and medical care plans which will effect tens of thousands of Jewish refugee children who will soon arrive in the Holy Land.

Mrs. Schoolman was chairman of the national medical committee of Hadassah for six years, during which time she administered the American end of the group's network of Palestinian health projects. Having lived in Palestine for two years before the war, she served on the Tel Aviv Hospital committee.

VA Hospitalized Patients on Increase.—The number of World War II veterans receiving hospital care from Veterans Administration reached an all-time high of 52,032 on August 1, the latest date for which official figures are available.

This is an increase of nearly 100 percent over the total for two years ago when 21,271 War II veterans were receiving hospital care.

Dr. Suter Receives Scientific Recognition.—Results from a reader poll conducted by *Chemical Bulletin,* publication of the Chicago section of the American Chemical Society, illustrated that Dr. Chester Merle Suter, divisional vice-president of the Sterling-Winthrop Research Institute, and director of chemical research, Winthrop-Sterns Inc., has been designated "one of the ten ablest chemists or chemical engineers" working in the United States in the field of medicinal chemistry.

Under Dr. Suter's direction a new synthesis of tryptophane, used in fortifying protein hydrolysates, was produced at the Sterling Institute and made available commercially. The doctor is currently editing a series of books on medicinal chemistry sponsored by the Medicinal Chemistry Section of the ACS.

Industrial Authorities Named for NYU Board.—Ten of the nation's top-ranking authorities in the field of industrial medicine, have been appointed to the Medical Advisory Committee of the Institute of Industrial Medicine, Department of Preventive Medicine, New York University-Bellevue Medical Center.

Dean Currier McEwen of the New York University of Medicine, announced that among the following leaders who have accepted appointments are: Dr. J. M. Carlisle, medical director of Merck and Company; Dr. A. G. Cranch, director, industrial toxicological department, Union Carbide and Carbon Corporation and Dr. David H. Goldstein, medical director, New York Times.

Kress Foundation Extends Gift to N. Y. U.—Bellevue Medical Center.—Rush H. Kress, vice president of the Samuel H. Kress foundation announced its conditional gift of $1,000,000 to the current $15,575,000 New York University-Bellevue Medical Center Fund; $500,000 will be donated when $7,500,000 has been received toward its goal, and another $500,000 will be given when the fund has reached its final objective.

Pneumonia and Influenza Mortality on Rapid Decline.—*Metropolitan Life Insurance Company's* Statistical Bulletin pointed out that mortality from pneumonia and influenza continues to decline rapidly and the prospects are that the two diseases together, will be little more than a minor cause of death in the near future.

However, optimism should be kept at a minimum since reports also indicate that the pneumonia problem is not yet solved. The toll taken year after year in the past was so high that even after the remarkable success of recent years, pneumonia and influenza still account for a large number of deaths. It was also said that only certain types of pneumonia respond to treatment by the sulfa drugs and penicillin; the virus pneumonias for instance, are not amenable to chemotherapy.

Delaware To Conduct Semiannual Cancer Tests for Women.—This state's 4,700 women over 40 years of age will be given the opportunity to receive semiannual cancer tests under a new approved plan by the Delaware Division of the American Cancer Society. Two hundred of the state's three hundred physicians will be used in giving the tests, and patients who can afford it will be expected to pay $3 for each examination.

Grants Itemized for NYU Research.—Among the outstanding research grants totalling nearly three-quarters of a million dollars for New York University College of Medicine, are the following: the National Foundation of Infantile Paralysis, Inc., gave a total of $70,000 to the Department of Bacteriology and Department of Medicine, with bacteriology receiving $40,000 for studies of the disease generally and medicine receiving $30,000 for studies of drugs effective against the disease; the Foundation's Greater New York Chapter donated $20,000 to the Department of Rehabilitation and Physical Medicine to evaluate the physical, mental, social and vocational handicaps resulting from the disease and the estate of Louise Wallace Hackney donated $48,000 for research, or treatment or prevention of the disease.

Hospital Plans Approved for Mercer County.—Applications for federal and state aid have been approved by the state director of public health for the construction of a three story, fifty bed public hospital by Mercer County, Aledo, Ill.

Personals

Dr. Homer Smith, chairman of the Department of Physiology of the New York University College of Medicine, was the recipient of the 1947 Lasker Award by the American Public Health Association at the association's 75th annual meeting which took place at Atlantic City.

Dr. Smith's research and studies on cardiovascular and renal physiology has provided the background for better understanding and future investigations in this field aimed at the eradication of the high mortality rate among heart disease sufferers, 1600 of whom die every day.

The new director of the Tuberculosis Control Division of the Kentucky State Board of Health is *Dr. Clarke W. Mangun, Jr.* Dr. Mangun of the United States Public Health Service, has spent two years in tuberculosis control work in Florida.

Arthur G. Mulder, Ph. D., has left the University of Tennessee College of Medicine, Memphis, to go to Loyola University School of Medicine, Chicago, to act as associate professor in physiology.

Dr. J. W. Hough has been transferred to Washington, D. C., for duty with the Industrial Hygiene Division of the United States Public Health Service, after serving the California Department of Public Health for nearly a year.

The new assistant chief of the State's Relations Divisions of the Public Health Service is *Dr. A. L. Chapman.*

Two newly appointed consultants in mental health to the Public Health Service on expiration of their terms on the National Advisory Mental Health Council are, *Dr. Frank F. Tallman,* who recently resigned as commissioner of mental hygiene, Ohio State Department of Public Welfare, and *Dr. George S. Stevenson,* medical director, National Committee for Mental Hygiene.

Recently named as acting medical director for the Veterans Administration in Ohio, Michigan and Kentucky is *Dr. Peter A. Volpe,* Worthington, Ohio. Dr. Volpe, who formerly practiced in Columbus, succeeds *Dr. Cyril H. Francis,* who has been transferred to a similar position in Denver.

Dr. Thomas Hull, director of exhibits, has been authorized to act as executive director of medical exhibits at the Museum of Science and Industry of Chicago.

New staff member of Duke University School of Medicine, Durham, N. C., department of neuropsychiatry is *Dr. William W. Sargant.* The British psychiatrist will serve as visiting professor for one year. Dr. Sargant is physician at the Maudsley Hospital, London, where he has conducted research for ten years and serves as clinical director of psychiatry, Sutton Emergency Hospital.

The first Borden Award, a gold medal and $1,000 to the Association of American Medical Colleges, was received by *Vincent du Vigneaud,* Ph. D., Cornell University College of Medicine. Professor du Vigneaud an active investigator in biochemistry for many years, has made noteworthy contributions in regard to the chemistry of insulin, sulfur-containing amino acids and biotin and to the nutritional significance of amino acids containing sulphur.

William W. Bauer, director of the Bureau of Health Education of the American Medical Association since 1932, has been awarded the Elizabeth Severance Prentiss National Award in Health Education. This award is given annually by the Cleveland Health Museum to the person who has made the most outstanding contribution to health education. It was established in 1943.

The Rose Lampert Graf prize of the American Association for Thoracic Surgery has been awarded to *Dr. Robert M. Eaton,* Grand Rapids, Mich. It was presented for his paper on "Pulmonary Edema: Experimental Observations on Dogs Following Acute Peripheral Blood Loss."

Dr. Henry E. Sigerist is now residing in Switzerland where he plans to write eight volumes on the history of medicine since the beginning of civilization. He has recently retired as professor of medical history at the Johns Hopkins University, Baltimore, and has accepted appointment as research associate in medical history at Yale University School of Medicine.

Newly inaugurated health and medical consultant to the Federation of Jewish Charities of Philadelphia is *Dr. Henry B. Makover,* formerly of the United States Public Health Service and recently associate director of Montefiore Hospital for Chronic Diseases, N. Y.

In response to his public health services rendered Costa Ricans in San Francisco, *Dr. Jacob C. Geiger* received the official citation and scroll of the president of Costa Rica. Dr. Geiger, director of public health in San Francisco, also was the recipient of the Presidential Medal of Merit from the Nicaraguan colony in San Francisco.

Dr. Robert B. Lewy has been recently appointed clinical assistant professor of otolaryngology at the University of Illinois College of Medicine.

Lecture Series Scheduled at New York Academy of Medicine

The twenty-second annual series of Friday afternoon lectures at the New York Academy of Medicine is now in progress. These lectures, which are intended to keep practicing physicians abreast of developments in techniques of diagnosis and treatment, are delivered at the Academy Building, 4:30 p. m.

DOCTOR ISIDORE WILLIAM HELD

SOLOMON R. KAGAN, M. D.
Roxbury, Mass.

Doctor Isidore William Held was born in Boryslav, Austria, May 15, 1876. He received his Doctorate of Medicine from Jefferson Medical College, Philadelphia, in 1902. He continued post-graduate work in Berlin and Vienna, for four and one-half years (1907-8; 1910-11; 1913-14; 1921-22; 1926-27), under such internationally prominent men as: Professors Edmund von Neusser, Hans Eppinger, H. Strauss, Friedrich Kraus, Ludwig Peck, A. Bickel and Theodore Brugsch.

He has been consulting physician at Nathan and Miriam Barnet Memorial Hospital, Paterson, N. J., since 1916; Israel Zion and Beth Moses Hospitals in Brooklyn, N. Y., since 1917; Beth El Hospital, Brooklyn, N. Y., since 1932; Jewish Memorial Hospital, New York, since 1925; Rockaway Beach Hospital, since 1930; attending physician at the Beth Israel Hospital, New York, from 1929-1945, where he was then appointed as consulting physician. He was clinical professor of medicine New York University, College of Medicine, from 1935 to 1941 and retired at the age of sixty-five. He was an Inactive Major, U. S. Medical Reserve Corps.

Dr. Held is the author of 86 original monographs and articles dealing with gastro-enterology, hematology, roentgenology, cardiology and medical biography. He is co-author with Dr. M. H. Gross, of a translation from the German, of *Differential Diagnosis of Internal Medicine* by Matthes (1925). Also, together with Dr. M. H. Gross, he translated from the German Wegele's Work entitled, *Therapeutics of the Gastro-Intestinal Tract* (1913). In 1946 his medical work entitled, *Peptic Ulcer—Its Diagnosis and Treatment* was published, which was co-authored with Dr. A. Allen Goldbloom who has been his associate for over twenty years.

Dr. Held has been Diplomate of the American Board of Internal Medicine since 1937; Fellow of the American College of Physicians since 1931; Fellow, New York Academy of Medicine; Fellow, American Medical Association; Fellow, National Gastro-enterological Association, since 1934; member of the American Heart Association, the American Association for the Advancement of Science; the American Association for the History of Medicine, the New York State and New York County Medical Societies, Association of Military Surgeons, American-Soviet Medical Society, and several other local medical societies.

In 1941 money was raised by his friends for the establishment of the "I. W. Held Fellowship Fund" at the New York University College of Medicine.

Dr. Held has also dedicated a great part of his life to activities on behalf of charitable, civic and philanthropic institutions both here and abroad. Outstanding among his activities were a few of the following: Founder of the Federation for the Support of Jewish Philanthropic Societies of New York City, some 30 years ago; member of the National Council for the American Jewish Joint Distribution Committee, Inc. He was also one of the original founders of, and generous contributors to the American Jewish Physicians Committee, the purpose of which is to build and maintain a medical school in Palestine connected with the Hebrew University.

His family consists of the following: Wife, Fannie Josefsberg Held; daughter, Ruth Held Goldbloom; a brother, Adolph Held, Director of Health and Welfare of the International Ladies Garment Workers Union and chairman of the Jewish Labor Committee; a sister, Dora Held Watnick, wife of Dr. Joseph L. Watnick. His only son, Abraham Held, Captain, A. U. S., died in active duty in Germany, April 9, 1945. Dr. Held has three grandchildren.

Held was one of the internists who was a believer in clinical entity of chronic (recurrent) appendicitis. Held stated that in rectrocecal appendicitis, the pain, although persistent in the right groin, is referred to the appendicular region if pressure is exerted over the right groin.—Held's sign of appendicitis.

In his recent monograph on *Peptic Ulcer—Its Diagnosis and Treatment,* Held was in the opinion that of all the various theories of the cause of peptic ulcer, the one most acceptable is that of the constitutional factor. This theory explained the finding so often observed in individuals where there is a high stomach and low colon or a low stomach with a high colon.

Held had modified the treatment of intractable peptic ulcer by advocating the introduction of the duodenal tube into the jejunum. This is known as jejunal feeding. This method has proven to be more satisfactory than the others because it is better tolerated by the patient. The tube is introduced away from the site of the ulcer and prevents nausea.

Doctor Held's early studies in hematology had aroused his interest in the clinical pathological consideration of lymphadenopathy. He considered the conception of dividing the lymph node into two structural components, the corticomedullary portion and the reticuloendothelium portion. The main function of the former is to produce lymphocytes while that of the latter was similar to the reticuloendothelial system elsewhere in the body.

Doctor Held has been interested in the development of a system of reciprocity in post-graduate medical study, through the medium of exchange pro-

fessorships, between the United States and Europe, and while visiting in Berlin in 1927, he enlisted the aid of Professors F. Kraus and Theodore Brugsch, of the University of Berlin, through whom many influential men in Germany were interested in the project.

As a result of Dr. Held's efforts the New York Academy of Medicine created a committee on international relations, one of the main purposes of which was to develop and encourage reciprocal post-graduate work.

Dr. Held died in New York City on March 2, 1947.

176 Seaver St.

"GOOD HEALTH" PROVISION IN LIFE POLICY APPLICATION

The witnesses in the case were (1) Dr. Spencer for the insurance company. He examined the insured on February 5, 1945; (2) Dr. Bayer, medical examiner for the insurance company at the time the policy was issued, for the beneficiary; (3) and (4) insured's widow and daughter-in-law; (5) Dr. Gardner, who attended the insured.

Dr. Spencer testified that when he examined him on February 5, 1945, he noticed that at the angle of the left jaw the insured had a large tumefaction about the size of a hen's egg "that was visible so that anyone could see it."

Dr. Bayer testified as to the thoroughness of his medical examination of insured for the company on April 15, 1945, "that he found no evidence of goiter, enlarged glands or other tumor; that he did not see any evidence that he had a cancer, and that he made a medical report to the company that, in his opinion, Mr. Hairell had no physical defects or deformities. He testified, however, that a person could have a cancer without it showing and that most cancers are missed until a thorough x-ray examination is made."

The widow testified that insured did not have a swelling on his throat the day the application was signed; that he had no deformity, and that there was no swelling on his neck until sometime between June 1 and 15, 1945, when a small "kernel" appeared. The daughter-in-law testified that the first time she noticed a swelling of any kind on insured's throat was in June or July, 1945.

Dr. Gardner testified he first saw the insured early in July, 1945; that there was then a small swelling on his throat which appeared to have been there only a short time. He also testified that the man "had a very fast growing type of cancer, and that because of its location on the throat, a person having this type of cancer lived only from six to nine months after it developed and became malignant; that, in his opinion, Mr. Hairell's condition had developed into cancer, or had become malignant, only a short time before July, 1945."

The above testimony of Dr. Gardner, and of the insured's widow and daughter-in-law, if believed by the jury, would, the appellate court said, "support the special issue finding that the insured was in good health on the date said policy was issued, and the jury had the right to believe their testimony and to disbelieve the testimony of Dr. Spencer. It matters not whether an appellate court would have believed the testimony on which the jury based their finding of fact, and that finding of fact, which is supported by competent testimony, is binding upon this court."

Action was brought on a $1000 life policy by the beneficiary. The insurance company's defense was that the insured was suffering from cancer when the policy was issued and was not then in good health, so that, under its terms, the policy did not take effect. The policy contained the usual provision under which the company undertakes no liability under the policy until it is actually delivered to and accepted by the insured during his life time and in good health.

The insured applied for the policy February 14, 1945. It was issued February 27, 1945. The insured died on April 17, 1946. In the application the insured represented that he was in good health; that no one had expressed an unfavorable opinion as to his insurability, and that he had never been advised to have a surgical operation.

A special question was submitted to the jury, in reply to which they found that the insured was in good health on the date the policy was issued. Notwithstanding this verdict of the jury the trial court rendered judgment in favor of the insurance company; on its motion to have the jury's verdict set aside. The beneficiary in the policy appealed. The lower court's judgment was reversed by the Texas Court of Civil Appeals and judgment was rendered on the verdict. Hairell vs. Texas Prudential Ins. Co. 206 S. W. 2d 689.

It is well settled in Texas that a jury's verdict cannot be ignored and judgment rendered *non obstante veredicto* (notwithstanding or disregarding the verdict) unless the verdict is without support in the evidence, or is contrary to the conclusive evidence.

And under the Texas rules of procedure in civil cases where, on appeal, an appellate court, (in this

instance the Court of Civil Appeals) determines that a judgment non obstante veredicto was erroneously entered, such an appellate court "shall reverse the judgment in harmony with the verdict." Applying this rule, the Court of Civil Appeals held that "it became our duty to reverse the judgment of the trial court and to render judgment for appellant and against appellee Insurance Company for the sum of $1000, with interest thereon from April 17, 1946, for $120, the statutory penalty of 12 percent of the face amount of said policy of insurance and for the sum of $500 as attorney's fees."

In arriving at the above decision the Texas Court of Civil Appeals held that the burden of establishing the fact that the insured was not in sound health on February 27, 1945, the date on which the policy was issued, was on the insurance company.

CAUSAL CONNECTION BETWEEN HEART CONDITION, AUTOMOBILE ACCIDENT AND INSURED'S DEATH

In an action for the death of a passenger in a taxicab who died after a collision of the cab with an automobile operated by one of the defendants (the other being his insurer against liability) the principal question on appeal from a judgment for plaintiffs for $5000 was whether the proof in the trial court sustained the jury's award of damages as the result of the automobile operator's negligence "and whether that award was warranted by the proof depends", the appellate court said, "on whether there was sufficient competent, credible evidence from which the jury could find that the injuries then sustained by King (the taxicab passenger) as the result of Hillestad's negligence were the cause of a heart attack which King had on August 15, 1945, by reason of a coronary occlusion."

The automobile accident happened on June 28, 1945. When it occurred the cab rolled over on its top which caved in and King was crushed in the cab. He then complained of having pains in his chest and back, and various other detailed injuries. After an hour he had gone to his employer's office and went to bed. Pain in his chest necessitated four treatments. A different doctor consulted could not find anything wrong with his chest. He testified that when he exerted himself the pain made him short-winded and made it hard for him to breathe.

After the plaintiff, (who died while the case was pending) several medical experts testified. Dr. Werner, who treated King three times on August 15, and who then told him to go to the hospital, where an electrocardiagram was taken which showed that his heart was in bad shape. King consulted Drs. Nimz and Marply, whom he had seen before on February 24, when he was not having any pains in his chest.

Dr. Nimz said that it was his conclusion that there was some damage to the heart caused by the accident and that King had a non-puncturing injury, a contusion in the area of the chest overlying the heart. He went on to say that it was his theory that some outside blow damaged King's heart muscle at the time of the accident, and in his opinion, based on King's examination he was suffering from a myocardial damage in the front wall of the heart caused by the blow or contusion to his chest in the accident.

Other expert witnesses on hypothetical questions were, Dr. Dawson for plaintiff who testified that his trouble came from the accident. Dr. Werner gave the opinion that King's heart condition was not a traumatic condition and that King had sustained a coronary occlusion and that the accident did not have anything to do with the heart condition at all.

Dr. Rosen, called as one expert witness by defendant testified that it was his opinion that the symptoms and heart condition complained of by King could not have been caused by an outside blow and that King's heart condition of August 15, 1945 could probably have occurred without any history of a previous accident.

"King died after the trial and entry of judgment as a result of coronary heart disease. In view of the evidence" which the court summarized in one long sentence, "there was sufficient evidence if considered credible by the jury, to warrant finding that the injury to King's heart, was caused by the accident of June 28.

"Consequently, it was within the province of the jury, to find to that effect, although there was testimony to the contrary by Drs. Werner and Rosen. Inasmuch as there was sufficient competent evidence to sustain the conclusion stated above, this case is definitely distinguishable from Vogelsang vs. Mason and Hanger Co., 250 Wis. 242, 26 N. W. 2d 678. It follows that the judgment must be affirmed." Jorgensen vs. Hillstad *et al.* Wisconsin Supreme Court, 27 N. W. 2d 799.

* * *

The Bell telephone was introduced the year that Edward Headlam Greenhow of England (1814-1888), published his cases of the disease to which the name of *Greenhow's disease* has been given. The disease was Vagabond's disease simulating Morbus Addisonii. It constituted the Pityriasis niger of Willan.

LETTER FROM BRITAIN

(From Our Own Correspondent)

Awards of the British Physical Society

The following awards for 1947 have been made by the British Physical Society: Duddell medal to Dr. R. H. J. Van de Graaf of Massachusetts Institute of Technology, for the invention and development of his high voltage electrostatic generator; Charles Cree medal and prize to Sir Edward Appleton for his investigation of the ionosphere; and the Charles Vernon Boys prize to Dr. C. F. Powell of the H. H. Wills Physical Laboratory, University of Bristol for his development of the photographic plate technique for the investigation of fundamental particles.

New Monthly Research Journal

Recently there has been published a monthly research journal, one of science and its applications. This magazine is edited jointly by Dr. P. Rosbaud and Mr. D. R. Rexworthy, with the assistance of a scientific advisory board under the chairmanship of Sir John Anderson with Professor R. S. Hutton as secretary.

It is stated that the main object of this journal is to forge a link between fundamental science and its application in industry and elsewhere in a purposeful and practical manner by selecting its limitations in viewpoint instead of in subject matter. The editorial article in its first issue is by Sir John Anderson; in following numbers the articles will be written by members of the Scientific Advisory Board or by leading scientists.

Irish Chemical Association

At the annual general meeting of the Irish Chemical Association the following officers and council were elected for the 1947-48 session. Professor T. S. Wheeler, president; Professor E. J. Conway, vice president; Hon. Secretary, G. F. O'Sullivan; Hon. Treasurer, J. Belton; Council, Dr. V. C. Barry, I. W. Breaden, D. Crowley, B. G. Faban, Miss M. Mac Neil, N. V. Nowlem, D. O. Iuama. Professor T. S. Wheeler gave his presidential address on "A New Aspect of the Claison Condensation".

British Association for the Advancement of Science

Sir Henry Dale in his presidential address at the meeting of the British Association, Dundee, Scotland, discussed "Science in War and Peace". He ended an eloquent summary of the conditions in war with the hope that scientists can keep as the constant aim of their endeavor in spite of all that might excuse discouragement, the revival of an intimate brotherhood of the men of science of all nations, working together in full confidence, once more as a world community.

Control of the Tsetse Fly in South Africa

The method of spraying D.D.T. by means of the airplane has been employed with considerable success and has resulted in a significant drop in the incidence of the tsetse fly in the area thus treated. The flies were not eradicated but the numbers that survived were small.

This was only a pilot experiment and an enormous amount of work will be required before the relative value of this or any other method of control can be assessed.

September 24, at the London School of Hygiene and Tropical Medicine, Dr. P. I. du Toit, director of Veterinary Services, Union of South Africa, gave an address on recent tsetse fly control experiments in South Africa. It seems that spraying D.D.T. from airplanes may solve a problem in South Africa which until solved, will render certain districts of South Africa uninhabitable to man and beast. The airplane can reach and spray areas otherwise impossible to reach.

The cost will be large but it appears that the fly can be eliminated by such means which will in the end be well worth while. If the money expended on destruction had been employed in saving life, malaria might be extinct.

Fortunately the inroads of the tsetse fly are confined to one part of Africa; the breed only flourishes in Africa, while malaria is present in most parts of the tropics and subtropics and even in temperate climes. However, the hosts of malaria and of trypanosomiasis should be eliminated wherever and whenever possible without regard to cost.

Rockefeller Foundation and University of Leeds

The Rockefeller Foundation has made a further grant of $50,000 to the University of Leeds in support of the investigations of Professor W. I. Astbury into the molecular structure of biological tissues.

Work on Structure of the Human Foot

University College, London and British Boot, Shoe and Allied Trades Research Association jointly are offering a research fellowship (annual value about £650 [$3250]) tenable in first instance for two years, for work on the structure of the human foot, its mechanics and the mechanics of human locomotion. This work will be done in Department of Anatomy, University College, London, under the immediate direction of Dr. W. Fell in close liaison with the Research Association headquarters in Rettering, Northamptonshire.

* * *

Joseph Grindon, of St. Louis, described a peculiar affection of the hair follicle which he named Ecbolic folliculitis, but which has become known as *Grindon's disease.*

BOSTON ★ AUG 3 1949 ★ MEDICAL LIBRARY

Book Reviews

Infectious Fevers

The Acute Infectious Fevers. By Alexander Joe, D. S. C., M. D., F. R. C. P., D. P. H., medical superintendent, City Hospital, Edinburgh; lecturer on Infectious Diseases, University of Edinburgh. 64 illustrations. Philadelphia, Pa.: The Blakiston Co., 1947. Pp. viii + 276. Price $4.50.

This book is the outgrowth of clinical and teaching experience in London and Edinburgh. It attempts to answer the questions that are asked again and again by those responsible for the care of patients with the more common contagious diseases. Each disease entity is evaluated from the standpoint of pathology, etiology, transmission, infectivity, incubation, symptoms, complications, convalescence, relapse, diagnosis, prognosis, prophylaxis, treatment and isolation. The approach is purely clinical with a deep-seated understanding of pathologic physiology involved in the evolution and clearance of the disease. The literature is quoted profusely throughout the text giving the authority and the year but without a source of reference. Some emphasis is placed on the role of infectious disease in the pregnant woman, responsible for the development of congenital malformations in the offspring.

Dermatology

Dermatologic Clues to Internal Disease. By Howard T. Behrman, M. D., assistant clinical professor of Dermatology, New York University College of Medicine; adjunct dermatologist, Mount Sinai Hospital and Beth Israel Hospital; associate dermatologist, Hillside Hospital; diplomate of the American Board of Dermatology and Syphilology; fellow of the American Academy of Dermatology and Syphilology. Illustrated. New York, N. Y.: Grune and Stratton, Inc., 1947. Pp 165 Price $5.00.

There is an apparent need for the correlation of the manifestations of skin disorders with those arising in some visceral dysfunction. The association between skin disorders or disease patterns is not a new concept. The skin must be considered not as a covering separate from the rest of the body but as a distinctly functioning and protective cloak which has nervous, vascular and hormonal intercommunications with the visceral organs and the central nervous system. This is emphasized from time to time by many an internist and dermatologist. The former has frequently found that the detection of certain cutaneous alterations and the recognition of their character are of considerable help in solving difficult problems in differential diagnosis. The dermatologist, on the other hand, has oftentimes been able to bring relief to patients in instance of obstinate skin disease by recognizing the primarily internal source of the dysfunction and thereby employing the logical therapeutic measure.

The subject matter is presented in the form of concise descriptions of constitutional diseases exhibiting associated skin changes. Diseases of the skin of significance or diagnostic aid in the province of internal medicine are also included. Diseases adequately described in standard texts, such as common skin disorders and the exanthemas are not included. Unfortunately, the arrangement is alphabetic and synoptic rather than in terms of systemic disorders with dermatologic clues. It is not common for asthma to be associated with simultaneous skin manifestations. Hemoglobinuria encompasses a large range of internal disorders which are omitted. The practice of attaching names to disease has been adhered to against the current trend. Nevertheless, the book is a valuable diagnostic aid in everyday practice.

Pediatrics

Advances in Pediatrics, Volume II. Edited by S. Z. Levine, Cornell University Medical College, New York, N. Y.; Allan M. Butler, Harvard Medical School, Boston, Mass.; L. Emmett Holt, Jr., New York University College of Medicine, New York, N. Y.; A. Ashley Weech, University of Cincinnati, College of Medicine, Cincinnati, Ohio. Illustrated. New York, N. Y.: Interscience Publishers, Inc., 1947. Pp x + 409 Price $6.75.

An annual publication in a medical specialty as diversified as pediatrics has as its particular function the presentation of selected subjects of contemporary interest and importance to the pediatrist and practitioner alike. The value of such a publication may be judged by the choice of subjects, the manner of presentation and the selection of authors. The topics are timely, they provide new information and chart future trends in pediatric research; the reviews are comprehensive and scholarly; and the authors are recognized authorities in their respective fields.

The present volume presents eleven personalized monographs of diversified scope, etiology of congenital malformations, acute infectious lymphocytosis, role of fluorine in prevention and treatment of dental caries, the treatment of purulent meningitides, chemotherapy: penicillin, sulfonamides, streptomycin and tyrothricin, atypical pneumonia, endocrine and other factors determining the growth of children, virus diarrhea, prematurity, the genesis of physiologic hyperbilirubinemia, prevention of recurrences of rheumatic fever. These are the topics of current clinical and academic interest. The results of the observations presented are invaluable in everyday pediatric practice.

Internal Medicine

Internal Medicine in General Practice. By Robert Pratt McCombs, B. S., M. D., F. A. C. P., assistant professor of medicine and director of Postgraduate Teaching, Tufts College Medical School; senior attending physician, The Joseph H. Pratt Diagnostic Hospital; diplomate of the American Board of Internal Medicine. Second edition. 122 illustrations. Philadelphia and London: W. B. Saunders Co., 1947. Pp 741 Price $8.00.

The plan of this edition remains the same, embracing the basic problems of everyday practice in internal medicine. Special emphasis is placed on those diseases in which errors in diagnosis and therapy commonly occur.

The text is interspersed with physiologic principles underlying the methods of medicine and their integration with the clinical aspects of disease.

There is a new chapter on the diagnosis of psychiatric disorders with emphasis on psychologic abberations as a prelude to the group of ill-defined disorders.

New forms of therapy include lumbodorsal sympathectomy in selected cases of hypertension, the rice diet in hypertension and certain kidney diseases, high protein diets and protein hydrolysates in malnourished states, folic acid in macrocytic anemias and sprue, serum albumin in circulatory failure and nephrotic states, gamma globulins in the prophylaxis and treatment of measles and infectious hepatitis, chloroquine in malaria, para-aminobenzoic acid in rickettsial diseases, penicillin in syphilis and other infectious diseases, thiouracil and propylthiouracil in hyperthyroidism, estrogen therapy and castration in cancer of the prostate, benadryl and pyribenzamine in allergic disorders, cytochrome C in anoxic states, tridione in psychomotor disorders, heparin and dicumarol in vascular emergencies and so on. The book is a handy review of modern medicine as it can be applied in everyday practice.

Drug Handbook

A Handbook of Commonly Used Drugs. Including Certain Measures for the Control of Diseases Peculiar to the Tropics of the Western Hemisphere. By MICHEL PIJOAN, B. A., M. D., director, The Chemical Foundation Laboratory University of Colorado, Boulder, Colo., formerly Lieutenant Commander, MC (S), USNR Naval Medical Research Institute, Bethesda, Maryland and CLARK HARVEY YEAGER, M. D., Dr. P. H., chief of the medical section, health and sanitation division office of Inter-American Affairs, Washington, D. C.; lecturer on tropical diseases, Johns Hopkins Medical School and University of Maryland School of Medicine, Baltimore, Maryland. Springfield, Ill.: Charles C. Thomas, 1947. Pp 198 Price $3.75.

This work is not designed to replace the standard texts on pharmacology and represents a compilation of a personal accumulation of notes made by the authors while on field expeditions where reference material for drug usage is difficult or impossible to obtain.

The book is divided into two parts, the first of which takes up the therapeutics of drugs in relation to body systems (the nervous system, the hormone system, etc.), to certain well defined functions (automatic functions) and uses (analgesics), etc., and to some special diseases (anemias, lues). The second part of the book deals with the treatment of some of the common diseases peculiar to subtropical and tropical areas of our Western hemisphere (e.g., insect borne diseases). Included in addition are sections devoted to nutritional factors which are used pharmacologically.

Other chapters deal with arsenicals in the treatment of lues, with the bacteriostatic drugs of the sulfa group, and with some members of the group of antibiotics (penicillin, etc.). A valuable appendix contains information of a very miscellaneous nature.

For the purpose for which this book was intended and for field purposes, as indicated by the authors, the book is undoubtedly very useful.

Benjamin Rush

The Selected Writings of Benjamin Rush. Edited by DAGOBERT D. RUNES. New York, N. Y.: Philosophical Library, Inc., 1947. Pp. xii+433. Price $5.00.

Benjamin Franklin was 39 years old when Benjamin Rush was born. Curiously enough the two lived in Philadelphia, had much to do with freeing the Colonies, both signed the Declaration, devoted their lives to science and philosophy and to humanitarian interests. Fine upstanding Americans to the last breath. Just why and how Benjamin Franklin (1706-1790) overshadowed Benjamin Rush (1745-1813) in finding immortality in American history is an unanswerable question. But so it is in the relativity of greatness as Shakespeare so well defined the three degrees of it.

Benjamin Rush was born the day before Christmas (December 24, 1745) on a farm near Philadelphia. He was the idol of a learned uncle, Rev. Samuel Finley, who prepared him for Princeton where he was graduated before his 15th year! He studied medicine in Dr. Redman's office in Philadelphia, and then went to Edinburgh for his M. D., which he obtained in 1768. He then crossed the Channel to France with a letter of introduction from Franklin, returned to Philadelphia, set up his practice there, and thus became professor of medicine, University of Pennsylvania. Rush served as a military surgeon in the war of 1776, signing our great charter of freedom, and becoming a director of the U. S. Mint.

He was a teacher of chemistry, and also studied natural science and philosophy continuously. Living among the American Indians, he recorded their kind of "medicine", racial traditions and habits, and conceived a plan for a Federal University. He was in opposition to slavery and capital punishment, and still found time for studies in the Bible and religion in general, and wrote a dissertation on the virtues and vices of his fellow physicians!

Doctor Runes has done well in bringing the writings of Doctor Rush out of obscurity and editing them for present-day readers; for this truly great American ought to become better known to all of us. He was a brilliant exponent of all the factors which have made America supreme as a leader among the Nations of the world.

Ulcer Diagnosis

Peptic Ulcer. Its Diagnosis and Treatment. By I. W. HELD, M. D., F. A. C. P., attending physician, Beth Israel Hospital; and A. ALLEN GOLDBLOOM, M. D., F. A. C. P., assistant clinical professor of medicine, New York Medical College and Flower-Fifth Avenue Hospital. Illustrated. Springfield, Ill.: Charles C. Thomas, 1946. Pp. ix + 382. Price $6.50.

This monograph covers the pathogenesis, pathology, symptoms, diagnosis and treatment of gastro-duodenal ulcer and its complications.

Held and Goldbloom have segregated medical, borderline and surgical types of gastro-duodenal ulcer. More advanced lesions include penetrating, perforating, and callous ulcers. The complications of either form include gastric hemorrhage, motor

insufficiency, hour-glass formation, and carcinomatous degeneration.

In dealing with unsettled questions and the many theories of pathogenesis, Held and Goldbloom only consider those which have found experimental support. The constitutional factor has been emphasized because they believe that it plays an immense role in etiology, even though other features may be present which may be partially responsible. It is, however, regrettable that the psychosomatic aspects of ulcer are not given more extensive mention and discussion. Some of their points must be well taken, such as the belief that the inflammatory and other catarrhal mucosal changes and lesions are consequences but not the forerunners of ulcer.

Held and Goldbloom discuss the indications for surgery for the ulcer itself and for its various complicating factors and the optimum moment for its performance. They distinguish between the absolute and the relative indications for surgery and the role of associated intraabdominal disease in treatment. They wisely pay attention to the economic problem. They discuss the pro's and con's of the various presently available forms of operation. The reviewer agrees heartily with the authors' opinion that those who, under the influence of personal skill and the brilliance of immediate results, or because of limited experience, advocate only one kind of operation, often deprive a patient of perhaps greater benefit by some other type of procedure.

The authors review the immediate postoperative complications and accidents and the general postoperative management. They favor the cooperation of internist and surgeon and rightfully state that the treatment of gastro-duodenal ulcer by surgical means does not necessarily complete the cure. Further care and, if necessary, treatment for the operated case of gastro-duodenal ulcer necessitates a complete understanding of the new anatomical arrangement and of the new physiology. Frequently further treatment is necessary for the underlying habitus and as a preventive measure against recurrences, as well as for those unfortunate sequellae—gastro-jejunal ulcer, and its complications, for stenoses, for hemorrhage, etc., which are only too prone to occur.

The book is well conceived and written and should be helpful to students and general practitioners.

Allergy

Clinical Allergy. A Monograph on the Management and Treatment of Allergic Diseases. By ALEXANDER STERLING, M. D., fellow of the American Academy of Allergy; assisted by BEA STERLING HOLLANDER, A. B., M. D. 16 illustrations. New York, N. Y.: International Universities Press, 1947. Pp. 198. Price $5.00.

This little book contains much of value in small compass. It is in sketchy or notebook form, and is, therefore, easily consulted. There is a "graveyard" of remedies which have been tried and discarded over the years, and it is stated that animal and laboratory experiments which often seem convincing prove futile when tried on the *genus homo.* In the use of drugs, the author stresses "Four R's"—the right drug, way, time and dose. Extraordinary reactions to small doses may occur, and one better be mindful of the patient's statements as to past experience with any given drug. In the presence of "mixed infections" in the nose and throat, penicillin-aerosol may work great good, but in at least four cases cited, the reactions on skin and mucous membranes were violent.

Is allergy hereditary? Perhaps not, but the tendency is so strong that the author advises allergic asthmatics not to marry! Errors in diagnosis are not uncommon, and are caused by incomplete physical examinations, poor histories, and inadequate laboratory tests. One must make sure that wheezing and coughing are not due to an unresolved pneumonia or a malignancy in the lower airways! Several, brief, case reports support this statement.

The value of psychogenic treatment is emphasized. Many patients are "upset" by adverse conditions at home or in business, and some of them are malingerers in search of sympathy. All of these facts and factors should be full of caution for the medical man who makes a snap diagnosis of "hay fever" or "pollinosis". He may be wrong, in which instance he will get *nowhere* in treatment and the patient will go *elsewhere.* This is a very praiseworthy effort to bring a difficult subject to clinical understanding and evaluation.

Physical Medicine

Year Book of Physical Medicine. Edited by RICHARD KOVACS, M. D., professor of physical medicine, Polyclinic Medical School and Hospital, New York; attending physical therapist, Manhattan State, Harlem Valley State, Columbus and West Side Hospitals; visiting physical therapist, New York City Department of Correction Hospitals; consulting physical therapist, New York Infirmary for Women and Children, Mary Immaculate Hospital, Jamaica, New York. Illustrated. Chicago, Ill.: The Year Book Publishers, Inc., 1947. Pp 399 Price $3.75.

This book presents a review of the new developments of physical therapy which appeared in the literature.

The entire field is covered—Physical Therapeutic Methods—Applied Physical Therapy.

The abstracted material covers the essentials which appeared in the original papers in a crisp and readily readable fashion. This is an extremely valuable little volume and will save much time for the busy physician who is interested in the various phases of physical therapy.

* * *

Often, as we have intimated before, the name of a man is associated with a disease which he did not discover but only gave an appellation to, as *Barthelemy's disease,* or acnitis. Toussaint Barthelemy wrote a paper on acnitis, which was first described fifteen years earlier by Tilbury Fox as disseminated follicular lupus. Barthelemy reported the swelling of neighboring glands in herpes zoster.

SURGICAL DIGEST

By RICHARD A. LEONARDO, M. D.
Rochester, N. Y.

Male Sex Hormone for Cancer Testosterone proprionate is helpful for advanced cancer of the female breast, often for several or many months, until, finally, pulmonary and/or liver metastases occur, after which the patient goes down hill rapidly. Until something better is discovered, however, this treatment is well worth using.

Cancer of Gall Bladder For epidermoid carcinoma of the gallbladder with resectable liver metastases, William Sheinfeld feels that cholecystectomy and partial hepatectomy are justified, even though the operation may be purely a palliative one.

Incomplete Cholecystectomy If the cystic duct is not completely removed, then it may become dilated and infected, and harbor one or more stones which may account for numerous postcholecystectomy complications, often requiring a second operation. It is much easier for all concerned if the surgeon takes sufficient time and caution to do a complete operation at the first sitting. Secondary operations, because of masses of adhesions, are far from simple.

Treatment of Dysmenorrhea A. W. Tucker has had good results with presacral neurectomy for the treatment of dysmenorrhea not relieved by conservative measures. In this operation, the superior hypogastric plexus is removed and often is followed by satisfactory results providing the dysmenorrhea is not due to inflammatory or other pathologic changes in the pelvis. (This method also has the advantage of permitting pelvic exploration and other surgery if indicated.)

Cancer of Urinary Bladder In operable cases, total cystectomy is proving an efficient operation for cancer of the bladder. The ureters can be implanted into the sigmoid colon through an extraperitoneal approach (to avoid urinary contamination or possible subsequent leakage into the abdominal cavity). Especially in senile patients, a simple, bilateral cutaneous ureterostomy would be suitable, using a new cutaneous ureterostomy cup with cement.

Cancer of Uterine Fundus In patients with cancer of the body of the uterus who were treated with radical panhysterectomy (removal of all the adnexa and of the whole uterus), the five-year survival rate is about seventy percent. In the future, with better diagnostic procedures and with surgeons most cognizant of the indications and value of a diagnostic D. and C., this survival rate should be increased materially over the course of the next decade or two.

Radioactive Iodine and Hyperthyroidism Hertz and Roberts have shown recently that when given in doses of 5 to 25 millicuries to patients with Graves' disease who have not been treated previously with iodine, radioactive iodine is able to effect a cure of the hyperthyroidism in at least three-fourths of all the patients.

Estrogens in Wound Healing It has been long known that estrogenic preparations in postmenopausal or castrated females has a marked effect on the induction of hyperemia and epithelial proliferation in the vaginal tract. Later, it was shown, in experimental animals, that such females will heal more readily from skin wounds after the administration of estrogens. Recently, A. Sjovall reported the beneficial value of such therapy in sprayed female rats with experimental vaginal wounds. The group treated with estrogens healed much more rapidly on the average than did the control group. Experiments such as these form the basis for our clinical conception that the postmenopausal woman will convalesce more rapidly after operation (such as for procidentia uteri) if she is given sufficient estrogenic therapy preoperatively and during the early postoperative period. It is obvious, also, that young castrated women who are to be subjected to any subsequent major operation, should be properly "estrogenized," a necessary preoperative preparation for such cases.

Retrosternal Goitre This condition was found eight times in 321 cases. Some of the common symptoms were dysphonia, nocturnal dyspnea, dysphagia, and stridor. Occasionally, there also is cyanosis or edema of the face and/or dilitation of the veins in the neck and presternal regions. Unequal pupils signify compression of the sympathetics. X-rays clinch the diagnosis. In older patients a substernal thyroid occasionally contains malignant areas. Unless the entire intrathoracic mass is removed, necrosis and hemorrhage, and secondary infection with mediastinitis are possible complications. The capsule should be left where it is, near the lump, to avoid opening into the pleura.

182 Versailles Road

MEDICAL RECORD

A National Review of Medicine and Surgery, Established 1843

FORMERLY KNOWN AS THE MEDICAL JOURNAL AND RECORD

PUBLISHED MONTHLY BY

THE MEDICAL JOURNAL AND RECORD PUB. CO., INC.

Editorial and Executive Offices: 215 Fourth Avenue, New York 3, N. Y.
Office of Publication: 307 Main Street, Kutztown, Pennsylvania.

GREGORY STRAGNELL, M.D.....*Editor*
EDWARD C. TULKA.....*Business Manager*

Subscription Price: Under Domestic Postage, $4 Yearly; Under Foreign Postage, $4.75 Yearly; Single Copies, 40 cents.

Remittance should be made by New York Exchange, post office, or express money order, payable to The Medical Journal and Record Publishing Company, Inc., or by registered mail, as the publishers are not responsible for money sent by unregistered mail. Remittances from Foreign Countries should be made with International Money Orders.

MANUSCRIPTS

Illustrations: Photographs should be numbered and bear on the back author's name and title of article; top of the picture should be indicated. Glossy prints produce the best half-tones. Drawings and charts for reproduction should be made in black ink.

Bibliographies should follow the style of the Quarterly Cumulative Index Medicus of the American Medical Association, and should give name of author, title of article, name of periodical, with volume, page, month, day of month if weekly, and year.

Manuscripts should carry addresses of authors and should not be rolled.

Reprints are furnished. Prices can be secured after article is in type.

All material published in the MEDICAL RECORD is copyrighted and should not be reproduced without our permission.

All material for publication should be sent to THE EDITOR of the MEDICAL RECORD, 215 Fourth Avenue, New York 3, N. Y.

Exclusive publication: Original articles are accepted with the understanding that they are contributed only to the MEDICAL RECORD.

Preparation: Material must be typewritten and double spaced. Carbon copies or single spaced manuscripts will not be considered.

Changes other than the correction of errors will not be permitted after the article has been set in type, so be sure and write your paper the way you want it printed.

JANUARY 1948

Medicolegal Notes

Experts' Opinion That Plaintiff's Curvature of Spine "Could" Have Been Caused by Automobile Accident Held Admissible

In an action for personal injuries sustained by the plaintiff in an automobile collision, the Oklahoma Supreme Court held, in a 5 to 4 decision, Oklahoma Natural Gas Co. vs. Kelly, 153 P. 2d 1010, that it was proper to submit to the jury the question of whether the defendant's negligent act resulting in the collision caused the plaintiff's curvature of the spine and that a verdict for the plaintiff could not be said to be based upon conjecture and speculation, under the circumstances of the case, which were as follows: It was necessary for the plaintiff to prove by qualified expert witnesses the cause, extent and effect of the curvature.

The plaintiff's expert witnesses testified that the curvature "could" have been caused by the defendant's negligent act, or by other causes. There was evidence that before the accident the plaintiff was physically sound, and that soon after the accident she had curvature of the spine; and the evidence was held reasonably to negate all other causes.

Admitting that there is authority to the contrary the court felt committed to the rule that opinion evidence, such as that given by the plaintiff's expert witnesses, that a certain cause "might", "could" or "possibly" did or would bring about a certain result is competent and may have some probative value. But where such evidence is not corroborated by other evidence in the case, it is generally held to be insufficient, standing alone, to make out a prima facie case.

"Out of and in the Course of"

"One cannot recover compensation for an injury in so far as it is caused by one's own neglect to have remedial care. The injury to this extent does not arise out of and in the course of the workmen's employment. The proximate cause is the plaintiff's own failure to use reasonable care to overcome his disability. 'The chargeable disability is only that resulting from accident incurred in employment, and not that caused by the workman's carelessness preventing or delaying recovery from the accident.' Neault vs. Parker Young Co., 86 New Hampshire 231, 232, 166 A. 289 xxx Only actual injuries, past, present and future are compensable under the Workmen's Compensation act." Hickey vs. Brown Co., New Hampshire Supreme Court, 45 A 2d 217.

Merely Holding Out to be Engaged in Practice Is Not a Crime Without Proof that Defendant Did So Engage

Section 561-30 of the Administrative Code of the City of New York defines a "purveyor" as one who directly or indirectly engages in the business of supplying inhalation therapy service. To sustain a conviction of engaging in the business of a purveyor without a license, the Appellate Division, People vs. Weiner, 69 New York State 2d 41, holds that there must be proof showing that the defendant did engage in such business without a license. A showing merely that he held himself out to be so engaged is insufficient, and the Administrative Code provision cannot be extended to make such conduct a crime. The conviction was therefore reversed and the defendant discharged.

The court cited in support of its decision the case of People vs. Shakum, 251 New York 107, 113, where the Court of Appeals said: "It is well settled that a criminal statute should narrowly be construed; that acts otherwise innocent and lawful do not become crimes, unless there is a clear and positive expression of the legislative intent to make them criminal." In People vs. Phyfe, 136 New York 554, the same court said: "The citizen is entitled to an unequivocal warning before conduct on his part, which is not *malum in se* (a wrong in itself), can be made the occasion of a deprivation of his liberty or property". Also cited was People vs. Nelson, 153 New York 90, 94, where the court said: "Penal statutes must be strictly construed, and cannot be extended to cases that are not clearly covered thereby."

Dr. Pepper Dies in Pennsylvania's University Hospital

The scene of Dr. William Pepper's thirty-three years of service was the School of Medicine of the University of Pennsylvania, where the doctor passed away last month.

Dr. Pepper, seventy-three years old, was dean of the Medical School and dean emeritus since 1945. During the first World War, Dr. Pepper was a lieutenant colonel in charge of Army Base Hospital 74 in France. He was a former president of the Association of American Medical Colleges and the board of trustees of the Free Library in Philadelphia; a trustee of the University of Pennsylvania and a member of the American Philosophical Society.

Library Director Post Made Of Indefinite Duration

The Surgeon General has obtained Department of the Army approval of the recommendation that the position of Director, Army Medical Library, be made of indefinite duration. Army installations in this country and overseas are being circularized in an effort to secure applications from professionally competent young medical officers interested in this type of work who have demonstrated both scholarship and administrative ability.

Illinois Announces Research Fellowships

The graduate school of the University of Illinois announced the availability of four research fellowships to be awarded for one year in the fields of medicine, dentistry and pharmacy at the stipend of $1,800 per year.

These appointments cover a calendar year with a one month vacation, and fellows are considered for reappointment in competition with the new applicants. Eligible candidates are those who have completed a training of not less than eight years beyond high school graduation.

* * *

Louis Adolfe Duhring, born in the United States, 1845, studied in this country and abroad and was early identified with dermatology. Although it is said that Bazin foreshadowed it, and that Tilbury Fox gave the first description of the disease which bears Duhring's name, it is generally conceded that the American dermatologist deserved the honor of its clear elucidation and proper grouping. Duhring wrote the first American text book on dermatology. He reported the first case of granuloma fungoides in America, and described Dermatitis hiemalis.

Before the Patient Becomes Seriously Ill

The use of GRAY'S COMPOUND will save valuable time and effort in the restoration of your patient to his normal health.

Gray's Compound

stimulates the appetite and aids in the assimilation of nourishment. If the patient is "run down" from overwork, worry, seasonal colds and coughs, or suffers from the vague symptoms of old age and diminishing vitality, GRAY'S COMPOUND is usually indicated, and is a useful adjunct to such other medications as the case may indicate.

The active ingredients are: Extracts Gentian and Dandelion, Glycerine, Wine, Phosphoric Acid, Cardamom Comp. and Sugars.

THE PURDUE FREDERICK CO.

135 Christopher Street **New York 14, N.Y.**

(Also Compounders of Hyperol, a Utero-Ovarian Tonic)

International Poliomyelitis Conference Announces Sponsor

New York's Waldorf-Astoria Hotel, July 12 to July 17, will be the scene of the First International Poliomyelitis Conference, which will have as its sponsor—The National Foundation for Infantile Paralysis.

The Department of State has been requested to transmit invitations to more than 60 foreign governments, so that they will be represented by official delegates at the conference.

These officials will be asked to present summarizations of the problems of poliomyelitis in their countries at a special session. Presiding officer at this session will be Thomas Parran, M. D., Surgeon General of the United States Public Health Service.

Basil O'Connor, president of the National Foundation for Infantile Paralysis, will preside as official host to the delegates, while Hart E. Van Riper, M. D., the Foundation's medical director, has been appointed general chairman of the conference.

The program's agenda includes readings of scientific and technical papers on research and treatment of poliomyelitis, which will be presented by professional authorities in the field from this country and abroad. In addition panel discussions are scheduled on various schedules.

Also it was revealed that conference headquarters have been established in the Waldorf-Astoria Hotel under direction of Stanley E. Henwood, Chicago, who has been appointed executive secretary of the conference. Arrangements for the meeting will be directed from there by Mr. Henwood.

The program for the conference is being arranged by a seven-member advisory board which includes: Irvin Abell, M. D., clinical professor of surgery, University of Louisville; Morris Fishbein, M. D., editor of *The Journal of the American Medical Association;* David Lloyd, Ph.D., associate member of Rockefeller Institute for Medical Research; Kenneth Maxcy, M. D., professor of epidemiology at the Johns Hopkins University; Frank Ober, M. D., professor emeritus of orthopedic surgery, Harvard University, Rustin McIntosh, M. D., professor of pediatrics, Columbia University, and Thomas Rivers, M. D., director of Hospital of the Rockefeller Institute for Medical Research.

In addition to the above mentioned sessions, there will be a scientific exhibit department where demonstrations of muscle testing and treatment procedures will be shown, plus the presentation of a film program.

Coordinating this phase of the conference will be an advisory committee of Thomas G. Hull, Ph.D., director of scientific exhibits of The American Medical Association, and Charles F. Branch, M. D., director of scientific exhibits of The American College of Surgeons.

The inaugurational meeting of the First International Poliomyelitis Conference promises to be among the most enlightening medical gatherings scheduled for this year.

LAST WORD ON STOMACH ULCER

By Donald Cook, M.D. Ten years intensive research in the cause, prevention, and treatment of Gastric and Duodenal Ulcers. Outstanding book of the year. Illustrated. $5.00.

BEST WORKS ON SEX TOPICS

PSYCHOLOGY OF SEX, By Havelock Ellis. The master says: "A Man's Sex is what he is." **$3.00.**

SEX IN MARRIAGE, by Ernest R. and Gladys H. Groves. A safe guide in Marital relations for both sex. **$2.00.**

SEX TECHNIQUE IN MARRIAGE, by Isabel Emslie Hutton, M.D. "Nothing Essential is Omitted or Left in Obscurity." **$2.00.**

SEX LIFE IN MARRIAGE, by Oliver M. Butterfield. A practical, common-sense treatise, invaluable to those contemplating marriage. **$2.00.**

New Edition - "Modern Birth Control"

Sanctioned by Church, endorsed by Medical Profession. Explains the Ogino-Kanus method. No mechanical or antiseptic interference. $2.00, postpaid, including Timing Chart, showing fertile and sterile periods.

IMPORTANT NEW BOOKS

AMBULATORY PROCTOLOGY (New) By Alfred L. Cantor. A practical pain- and time-saving book. Successful treatment without hospitalization. 275 illustrations. **$8.00.**

THE EXAMINATION OF REFLEXES, by Robert Wartenberg, M.D. (New) Tells how to evaluate all the diagnostic reflexes, illustrated. **$3.00.**

PRACTICAL X-RAY TREATMENT (Enlarged third edition) By Arthur W. Erskine, M.D. Many new tables and illustrations. 13 Fact-packed chapters. $4.50.

OFFICE TREATMENT OF THE EYE. By Elias Selinger, M. D. Methods that may spell the difference between success and failure. Illustrated. 542 pages. $7.75.

OFFICE IMMUNOLOGY (including ALLERGY) by Marion B. Sulzberger et al, A New treatise on immunistic procedures in the office. Provides diagnostic, prophylactic, and therapeutic technics. $6.50.

Art of Anesthesia (New) by Paulel I. Flagg, M.D. Valuable for Student and Expert. Features all new drugs. **$6.00**

Sulfonamide Therapy in Medical Practice (New), by F. D. Smith, M.D. Exact dosage and toxic reactions of all the Sulfos and Penicillin. Illustrated. $5.00.

Pictorial Hand Book of Fracture Treatment (New), by Edw. L. Compere. Latest methods illustrated; technic of skeletal traction. $5.50.

Urology in General Practice, by Dr. N. F. Ockerblad (2d ed.). A mentor for practitioners; $4.00.

Bed Manners, (New) Bed-iquette for the married. An intimate and confidential resume of bed-going and bed-doings; humorous and instructive. Illustrated. $2.00.

The Urinary Tract, by Kerr and Gillies. A new Diagnostic X-Ray Atlas, with 120 full-page plates, a classic in expert film reading. 168 diseases are diagnosed. $6.50.

Acute Medical Disorders—Diagnosis and Treatment. By **Francis D. Murphy.** Illustrated. $6.50.

WORSTER'S ELEMENTS OF PHYSICAL THERAPY

NEW 7TH edition, revised and enlarged. Special chapters on Arthritis, Massage, Therapeutic Fever, Colon Therapy, up to date. Illustrated. $4.50.

Grover's High Frequency

The author's experience of thirty years practice. The fundamentals and physics of electricity thoroughly explained. New chapters on Short Wave and Hyperpyrexia. Price, **$3.50,** including Grover's unique book on Blood Pressure, with diagnostic chart.

NEW BABY BOOK

Containing a wealth of practical advice, checked by two pediatricians. Illustrated. a book for your patients about to become mothers. $2.75.

A TREASURY OF DOCTOR STORIES

By the World's Greatest Authors. among them Irvin Cobb, Dr. A. J. Cronin, Ring Lardner, Pearl Buck, Don Marquis, and 25 others. Excellent gift book for physicians and nurses. $3.00, postpaid.

"Archives of Physical Medicine" $5.00 the year, (Monthly)

Publishes all papers read at the Congress of Physical Medicine.

Send check with order and books will be prepaid. Or will ship C.O.D. plus postage and return charges.

We Supply any Book or Magazine.

FASSETT MEDICAL BOOKS 2300 Ralston Ave., Burlingame, California

New York Blue Cross Plan Makes $1,300,000 Grant to Hospitals

It was recently announced by Louis H. Pink, president of the Associated Hospital Service, that in order to help meet the critical emergency hospitals are now facing, Associated Hospital Service—New York's Blue Cross Plan has obtained the approval of the State of New York Insurance Department and the Department of Social Welfare to make an additional payment of $1,300,000 to its affiliated hospitals.

This additional payment is being made to adjust differences between the rates which the Associated Hospital Service had previously agreed to pay its 260 member hospitals and the increased charges which the hospitals have been compelled to make to the public because of rising costs—evident in today's standard of living.

Mr. Pink illustrated that the Associated Hospital Service has endeavored to meet soaring hospital costs by increasing its payments to hospitals since 1941 when the average daily rate paid for members was $6.75.

The present fixed payments to hospitals for members who are non-maternity patients in semi-private accommodations average $11.50 a day. Mr. Pink went on to say that the insurance and welfare departments have cooperated with the hospitals by permitting Associated Hospital Service to pay out an additional $1,300,000, the daily payments to many hospitals will be as much as $14.50 for Blue Cross members in semi-private accommodations.

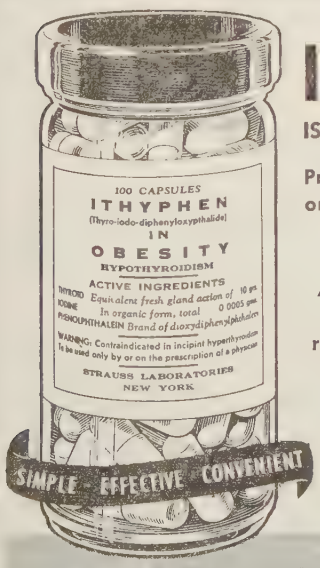
According to Mr. Pink, the Plan has paid out the sum of $18,554,294.74 since the beginning of 1947 for Blue Cross members who needed hospitalization.

"The extra disbursement of $1,300,000 which we are making," Mr. Pink said, "partly from earnings and partly from surplus, is necessary to help keep hospitals operating efficiently and secure proper services for our 3,225,000 members.

"We would not dip into our surplus, even to a limited extent, except in a serious emergency such as now confronts the hospitals. The difficulty faced by the hospitals and the need for our extra payment in the face of substantially increased payments to hospitals which began May 1, is due to inflation. Something definite must be done by the federal authorities to curb further inflation if our hospitals are to serve the public at rates people can pay."

Murray Sargent, president of the Greater New York Hospital Association, said, "In spite of inflation, which magnifies our problems, our hospitals will continue to cooperate to the fullest extent with Associated Hospital Service and maintain the Blue Cross objective of granting its members the finest hospital care available anywhere in the world. The higher the cost of hospital care, the greater the need there is for people in moderate circumstances to protect themselves and their family dependents by joining the Blue Cross Plan."

DOCTOR, in your obesity cases . . .



ITHYPHEN

IS THE RELIABLE PRODUCT

Prescribed nationally without one adverse report in over 19 years of use.

An outstanding product for the treatment of weight reduction in obesity. Acceptable to your patient.

Samples and literature on request. Kindly enclose your professional card or letterhead.

STRAUSS LABORATORIES

1328 BROADWAY, NEW YORK 1, N. Y.

"Pure Water Like Pure Air Is Vital To Health"

GREAT BEAR

IDEAL SPRING WATER

ELECTRIC WATER COOLERS AT SMALL MONTHLY RENTALS

•

ALSO ENJOY WHOLESOME GREAT BEAR BEVERAGES
Ginger Ale—Club Soda—Root Beer

•

GREAT BEAR SPRING COMPANY
New York—Brooklyn—Albany—Buffalo
Newark and the Oranges—Jersey City
Philadelphia

•

Consult Your Telephone Directory For Office Nearest You.

Free Home or Office Delivery in Above Areas.

State Aid Favored in N. Y. For Victims of Cerebral Palsy

At the recent all day conference of the New York State Cerebral Palsy Association, the importance was stressed for State legislation to aid the victims of cerebral palsy.

Dr. Morton L. Levin, assistant commissioner for medical administration of the State Department of Health told the eighty-five delegates that the problem was "properly a charge on the community as a whole" and should be financed, therefore, either through taxation or through some other means.

Chief of the Bureau of Physically Handicapped Children of the Department of Education, Dr. Joseph J. Endres, said that proper educational care —including psychiatric services and individual guidance—would cost $1,500 a year for each child afflicted with cerebral palsy.

Dr. Fleming—Hospital Administrator Dies in Florida

Dr. Mark L. Fleming, age 67, outstanding hospital administrator who retired in 1936 as general medical superintendent of the New York Department of hospitals, died in Orlando, Fla., last month.

Associated with the New York Public Hospital Service since 1901, Dr. Fleming served his internship at Bellevue Hospital. Later he was the assistant alienist there and in 1910 he joined the hospital's administrative staff as second assistant medical director.

Laboratory of Toxicology Inaugurated By NYU College of Medicine

The Laboratory of Research Toxicology, initial unit of the recently inaugurated Institute of Industrial Medicine of the New York University-Bellevue Medical Center, has been established under the direction of Dr. Norton Nelson.

Dr. Nelson, former research associate of the Children's Hospital Research Foundation, Cincinnati, and assistant professor of biological chemistry at the University of Cincinnati, has been named associate professor of industrial medicine.

Graduate biochemist of the University of Cincinnati, and later active in research in biochemistry, Dr. Nelson took a leading role in that field during World War II at Ft. Knox, Ky., where he was a member of the staff of the Armored Medical Research Laboratory. He was discharged as a lieutenant colonel of the Sanitary Corps.

Dean McEwen, NYU College of Medicine, characterized the establishment of the laboratory as the culmination of plans announced in June, when the Institute was inaugurated, under the leadership of Dr. Lanza, as a training and research unit, dedicated to the problems of industrial medicine.

Also incorporated in the Institute's plan is a group practice unit, from the college faculty, to offer to industrial and commercial concerns a complete health and medical service on a pre-payment basis.

USE THIS BLANK FOR SUBSCRIBING TO MEDICAL RECORD

The Medical Journal & Record Pub. Co., Inc.
215 Fourth Avenue, New York 3, N. Y.

Please enter my subscription to the Medical Record for one year, beginning .....

.....

☐ Enclosed find payment.
☐ Send me bill.

Name .....

Street .....

City ..... *State*.....

Subscription Price, $4.00 Foreign, $4.75

IN TIME OF NEED!

It is natural for our aged colleagues to turn to the medical profession . . . . It is also natural for them to turn to the PHYSICIANS' HOME for help and assurance . . . . Our pioneer efforts need your help. Make checks payable to . . . .

PHYSICIANS' HOME
52 EAST 66th STREET, NEW YORK 21, N. Y.

Sludging of Blood Discussed in Science

Investigators of the Universities of Chicago and Tennessee have recorded in a recent issue of *Science*, that some forty common diseases, including many that are infectious, cause sludging of blood through clumping of red cells.

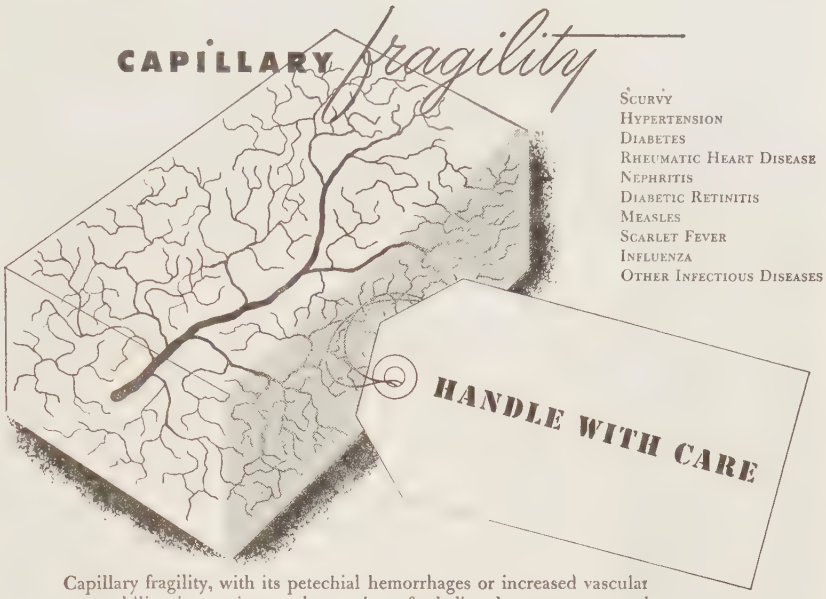
This study, conducted by Melvin H. Knisely, professor of anatomy, with the assistance of Dr. Edward H. Block and Miss Louise Warner, University of Chicago, cooperatively with Theodore S. Eliot, University of Tennessee, achieved for the first time a detailed comparison of the microscopic circulating blood in normal and diseased organisms, including the human body.

The investigation affords a new approach to the determination of the most effective drugs for treatment of disease with the study indicating that both the effect of the drug in killing the invading organism causing the disease, and its value in breaking up the sludged blood, must be considered.

In the seventeen year study, ten years were spent in determining with greater precision and detail the visible mechanics of the circulation of normal blood through the blood vessels. In particular the investigation was concerned with "bottlenecks" of circulation, such as the ability of the tip of the arteries to expand. This limit of expansion was found to be about three times the size of a normal red cell.

Normal physiology of the blood and the mechanics of its circulation

CAPILLARY *fragility*



Scurvy
Hypertension
Diabetes
Rheumatic Heart Disease
Nephritis
Diabetic Retinitis
Measles
Scarlet Fever
Influenza
Other Infectious Diseases

Capillary fragility, with its petechial hemorrhages or increased vascular permeability, is a serious and sometimes fatal disturbance encountered in a wide variety of conditions.

RUTIN. Capillary fragility—frequently encountered in many metabolic, infectious or deficiency diseases—is rapidly corrected in most patients by adequate dosage of Rutin, the clinically proved antipermeability factor.

VITAMIN C. When the capillary weakness is associated with scurvy, Vitamin C is specific in its curative effects.

Some cases which fail to respond to Rutin alone do respond to a combination of Rutin and Vitamin C. Hoskins[1] says "... Rutin may be less effective when a deficiency of Vitamin C exists. For this reason adequate Vitamin C intake must be assured for optimum results."

In the management of patients with any of the diseases characterized by capillary fragility, petechial hemorrhages, or increased permeability, DPS Formula 203 (Rutin—Vitamin C) is indicated for the correction of the capillary fragility.

[1]Hoskins, W. H.: Rutin, American Druggist 115:98 June 1947.

EACH TABLET CONTAINS:

Vitamin C . . . 300 U.S.P. Units	Calcium . . . . . 57.5 Milligrams
Rutin . . . . . 20 Milligrams	Phosphorus . . . 44.5 Milligrams

With Dehydrated Whole Lemon and other excipients and binders.

FORMULA 203

Specify Dartell

DARTELL LABORATORIES • 1226 South Flower Street, Los Angeles 15, California

GLYKERON . . . *a double-action antitussive*

because it is

1 MILDLY SEDATIVE

2 STRONGLY EXPECTORANT

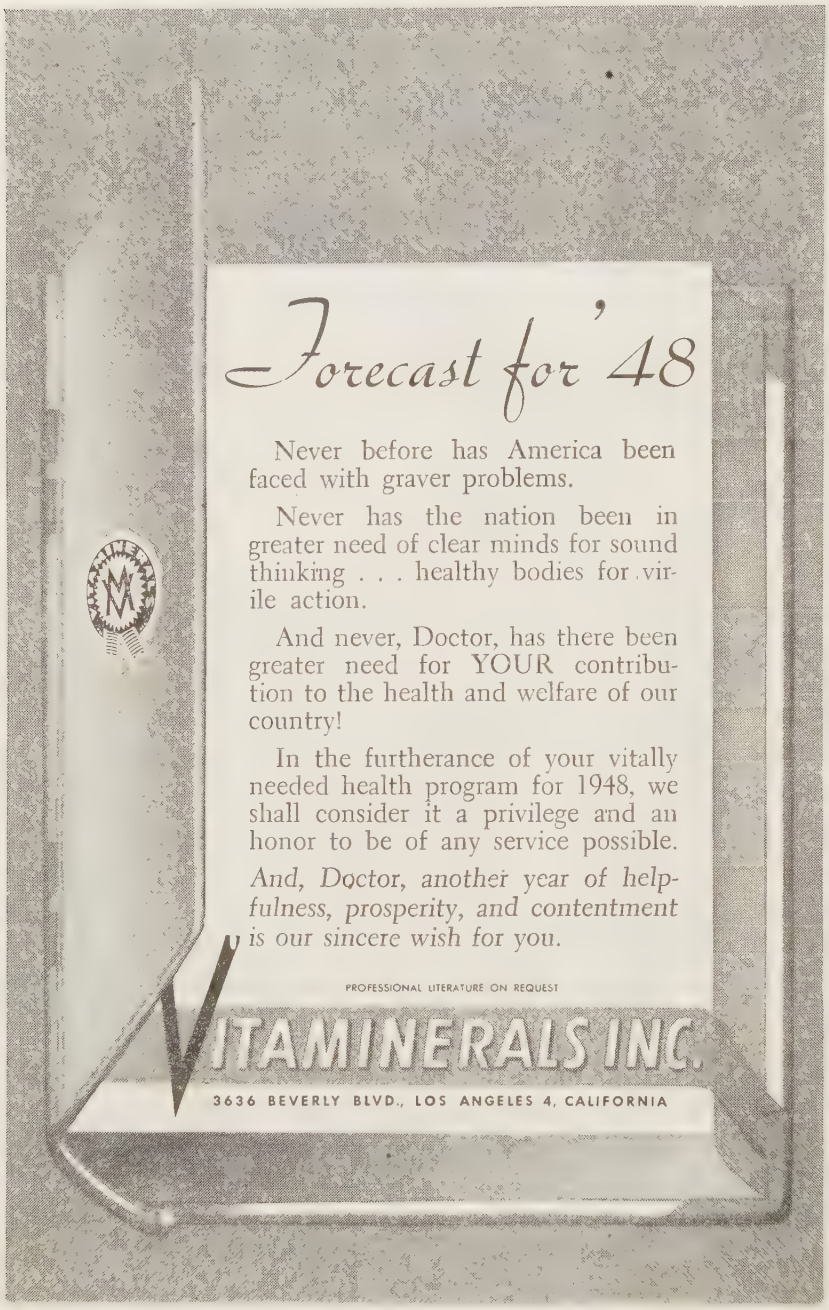
• It aids in breaking the vicious circle of coughs that are uselessly irritating or unproductive.

Dosage: For adults 1–2 teaspoonfuls every 2–3 hours or longer; children in proportion.

Supplied: In 4 oz., 16 oz., and half-gallon bottles.

May we send you valuable brochure?

MARTIN H. SMITH COMPANY, 150 LAFAYETTE STREET, NEW YORK, N. Y.


Forecast for '48
Never before has America been faced with graver problems.
Never has the nation been in greater need of clear minds for sound thinking . . . healthy bodies for virile action.
And never, Doctor, has there been greater need for YOUR contribution to the health and welfare of our country!
In the furtherance of your vitally needed health program for 1948, we shall consider it a privilege and an honor to be of any service possible.
And, Doctor, another year of helpfulness, prosperity, and contentment is our sincere wish for you.
PROFESSIONAL LITERATURE ON REQUEST
VITAMINERALS INC.
3636 BEVERLY BLVD., LOS ANGELES 4, CALIFORNIA

was made possible by the "cold light" Quartz rod technique originated by Dr. Knisely. This method made possible for the first time the microscopic observation, without distortion of any kind, of the flow of blood through the liver, heart, and other organs of animals watched directly through the microscope.

This observation furnished the means of demonstrating that the blood which can be seen in the white of the undamaged human eye constitutes a valid sample of all blood in the body.

The substance which "glues" the red cells together has been identified generally by preliminary chemical studies of D. B. Morrison, University of Tennessee, as a protein. No detailed understanding of the chemical and immunological properties of the substance is yet available.

Observation through the white of the eye of some 800 individuals with diseases showed the existence of the sludged blood. Among the nearly fifty types of clinically diagnosed diseases so observed were malaria, rheumatic fever, scarlet fever, meningitis, undulant fever, pneumonia, pulmonary tuberculosis, and rheumatoid arthritis. This part of the investigation was a survey, the cases not being followed in each instance through the whole course of the disease.

Grants to support the study were made from the Abbott Memorial Fund of the University of Chicago, the Winthrop Chemical Company, and T. V. A., which supported a malaria study at the University of Tennessee.

in whooping cough

ELIXIR BROMAURATE

IS A UNIQUE REMEDY OF UNIQUE MERIT

Cuts short the period of illness and relieves the distressing spasmodic cough. Also valuable in **Bronchitis and Bronchial Asthma.**

In 4 oz. original bottles. A teaspoonful every 3 to 4 hrs.

Prescribed by Thousands of Doctors

GOLD PHARMACAL CO. NEW YORK CITY

Legal Enactment of Nutrition Standards Urged by O' Connor

Basil O'Connor, national chairman of the American Red Cross, at the second annual dinner of the National Vitamin Foundation, stressed the importance of legal enactment of laws to maintain standards of nutrition comparable to the pure food laws since a majority of Americans suffer from these nutritional deficiencies.

To strengthen his views, Mr. O'Connor quoted survey estimates which reveal that 15 percent of the population have frank symptoms of nutritional diseases, and "what is even more shocking, nearly 70 percent of the people are suffering with subclinical disorders indicative of marginal deficiencies."

"Insured nutrition," which is what Mr. O'Connor terms his current proposal, would eventually result in the establishment of basic nutrition for the mass of people, which is so vital.

He said, "It may be wise to have insured nutrition rather than trust all our efforts to education. By law it is required that certain standards of purity be maintained in food items sold to the public. Are not standards of nutrition fully as important as standards of purity?

"Enrichment of flour is already a widespread practice and one that is accomplishing much good. But that good can be enhanced still further by adding other essential nutrients usually lost in the extraction and purifying processes. Other common foods like oleomargarine might well be fortified with the lacking vitamins. Our present technical knowledge would permit us to control vitamins and mineral content of canned and processed fruits and vegetables."

Mr. O'Connor, who addressed an audience of 150 notables in the fields of medicine, science, public health and pharmacy continued saying, "Nutritionally, we in the United States are better off than Europe; but only by comparison with Europe's deplorable state.

"Standing alone, our nutritional record is a denial of the smug boast that Americans are the "best-fed, best-clothed and healthiest people in the world'. Such statements are mere wishful thinking. The actual records tell a different story.

"Toward the close of the war, selective service records showed that about 40 percent of the men, considered to be in the prime of life, were unfit for military duty. And the majority of those disqualified had preventable nutritional defects."

Mr. O'Connor came to the conclusion of this talk by answering this pertinent question, "How can a country become economically healthy when her people are sick physically and mentally?"

He advocated, sales promotion techniques and smart merchandising methods.

Since the man in the street must be appealed to simply, he said, "It must be projected to him its concrete terms . . . a better job, more leisure, less doctor's bills; or to the woman as a better figure, more glamor, better complexion."

TECA
Specializing in the Manufacture of
LOW-VOLT and
HYDROGALVANIC GENERATORS
Write for Detailed Information TECA CORPORATION, 220 W. 42d STREET, NEW YORK 18, N. Y.

DR. BARNES SANITARIUM
STAMFORD, CONNECTICUT

For treatment of Nervous and Mental Disorders, Alcoholism and Convalescents. Carefully supervised Occupational Therapy. Facilities for Shock Therapy. Accessible location in tranquil, beautiful hill country. Separate buildings.

Telephone 2-1621

F. H. BARNES, M.D., Med. Supt.

NEW PRODUCTS

Westinghouse Develops Midget X-Ray Tube

A dental x-ray tube no larger than a power tube in a home radio set has been developed by Westinghouse Electric Corporation, Bloomfield, N. J. The new tube has operated steadily on test for 1,000 hours, the equivalent of 20 years of normal usage in a dentist's office.

One of the smallest x-ray tubes ever offered commercially, the new design minimizes stray radiation through the use of a copper hood that shields the tube's tungsten electrode. The hooded design serves as an equipotential shield that reduces the possibility of damaging cathode bombardment to a minimum when the focal spot is overloaded. Such overloading will bring the cathode to electron emitting temperatures. As a result, a flood of electrons will be released that will cause irreparable damage to the tube. The hood also serves as a grid that tends to block back discharge in case of moderate overloads.

Joseph Lempert, Westinghouse electronics engineer who designed the new tube, explained its mechanism in this manner:

"As the electrons bombard the target, x-rays are beamed through a tiny porthole in the hood onto the film through a window in the glass tube about the size of a dime. This window, made of special hard glass that transmits x-rays, is ground down to a uniform thickness of about twenty-thousandths of an inch for all tubes, assuring the radiographer of consistent exposures. Previously, tube windows had to be made thicker as a protection against unused electrical charges released within the tube. As a result, more than 10 percent of the useful x-rays were lost.

Mathews Offers Dictionary of Americanisms

In Mitford Mathews' forthcoming book, *Dictionary of Americanisms,* to be published by the University of Chicago Press, it will be proven that contrary to popular belief not all scientific words spring from classical Latin. An example of this reasoning is illustrated in the word "tularemia", (rabbit disease) which the author states derives its meaning from three languages.

Close examination reveals that the word is an American combination of "tul", a fragment of the word which Aztec Indians used long ago for bulrush; "ar", a Spanish suffix showing that the Spaniards became familiar with the Aztec term; and "emia," a word of Greek origin meaning blood.

This dictionary should prove most enlightening for persons interested in the derivation of words.

Thephorin New Hoffmann Product

A new antihistamine drug—Thephorin—for the symptomatic treatment of allergic disorders was recently announced by Hoffmann-La Roche Inc., Nutley, N. J.

Clinical studies covering about 1500 cases have demonstrated that Thephorin is highly effective in relieving urticaria, allergic rhinitis, hay fever, allergic skin diseases, allergic drug reactions and some cases of bronchial asthma.

In contrast with most other antihistamine drugs, it is not likely to produce drowsiness; in fact, it has a mildly stimulating effect in some cases. Thephorin is distinguished by a reassuringly low incidence of side reactions which are usually mild in character. The administration of this drug is not likely to interfere with the patient's normal activities. It is available in the form of oral tablets, 25 mg. each, bottles of 50 and 100, and as a palatable syrup, 10 mg. of Thephorin per teaspoonful (4 cc.), 4-oz. and 1-pt. bottles.

National Drug Adds Virus Vaccine to List of Products

The National Drug Company, Philadelphia, announced the addition of Influenza Virus Vaccine, types A and B to their line of biological products.

Influenza Virus Vaccine *national* is prepared from the allantoic fluid of chick embryos infected with types A and B influenza virus, concentrated and purified by differential centrifugation. The virus is inactivated with formaldehyde and standardized by mouse protection tests according to the official method recommended by the National Institute of Health. Each cc. contains equal proportions of killed types A and B virus.

Demonstrable antibody response first appears on the eighth day after injection and attains a high level within two weeks.

Duration of effective immunity has not been definitely determined. When vaccine of suitable potency is employed, the duration of effectiveness may last for 12 to 14 months.

Before each and every prophylactic dose, all patients should be tested intradermally with 0.02 cc. of the undiluted vaccine. If the test is negative or suggestive, vaccine may be given, although when reactions ensue, precautions should be taken before proceeding with immunization.

Immunization should not be attempted with this vaccine if the patient is allergic to egg proteins.

A single subcutaneous injection of this vaccine is sufficient for immunization. For adults—give 1 cc. For children under 12 years—0.5 cc. with proportionally less for the very young.

Influenza Virus Vaccine, types A and B *national* is packaged in 1 cc. vial (one immunization) and 5 cc. vial (five immunizations).

Streptomycin Presented in Improved Form by Sharp & Dohme

Sharp & Dohme, Inc., Philadelphia, announced the national release of a highly purified, improved form of Streptomycin, offering the advantages of uniform potency, minimal pain on injection and decreased toxicity.

Streptomycin, indicated principally for treatment of infections due to susceptible gram-negative organisms, has been found effective in combatting meningitis, bacteriemia, urinary tract infections, tularemia, tuberculosis, empyema and bacterial endocarditis. Extensive clinical investigations using this new drug in the treatment of other diseases are still in progress.

The drug is administered parenterally, intrathecally, by inhalation, orally and topically.

Streptomycin, S & D, is supplied in 20 cc vials, each vial containing 1.3 Gm. equivalent to 1.0 Gm. of streptomycin base.

Acnomel Introduced for Acne Therapy

Acnomel, introduced this month by Smith, Kline & French Laboratories, Philadelphia, is a therapeutically superior, cosmetically exceptional topical treatment for acne and rosacea. This product, because of its flesh tint blends with the skin so well as to be virtually invisible, and also masks unsightly lesions.

In Acnomel, sulfur and resorcinol are incorporated in a superior vehicle, which is a stable, grease-free hydrosol. This hydrosol base possesses all the virtues of the oil-in-water emulsion, yet is entirely free of wax, oil, or other greasy substance.

The advantages of this product, as reported are: 1. it is easy to apply smoothly and evenly; 2. upon application it dries in a few seconds; 3. its active ingredients are maintained in intimate and prolonged contact with the affected areas; 4. it removes excess oil from the skin; 5. it is readily washed off with water; 6. it is economical since there is no waste during application.

Acnomel is available on prescription only in 1½ oz. tubes.

New X-Ray Educational Department Started by Philips

North American Philips Company, Inc., N. Y., has started a new x-ray educational department which will correlate and distribute vital information on medical, technical roentgen research and development obtained by Philips organizations in this and other countries.

Jose de Carvajal-Forero, who planned and supervised erection of Roentgen Departments for Reconstruction Hospital, New York Polyclinic Medical School and Hospital, and Warner Institute for Therapeutic Research, is the director.

Fairchild Camera Produces Stereoviewer

The Fairchild Camera and Instrument Corporation has announced it is now in quantity production of its stereoviewer for three-dimensional study of 70-mm. x-ray negatives, with immediate delivery available.

This viewer in effect recreates the original object as it would normally be seen by an observer examining it from a distance of 40 inches. In addition, the image has the 50 percent greater brilliance as well as fineness of detail characteristic of viewing by transmitted instead of reflected light. Radiologists in hospitals, clinics, tuberculosis association and public health operations should find it of value as an aid to diagnosis.

Essentially, it consists of an optical viewing system, a light source, and a film-positioning mechanism, all built into an attractive and convenient all-metal housing. The carefully-built optical system is engineered to reduce eye strain, the light intensity is adjustable, and the viewer handles both roll and cut film.

The Fairchild stereo-viewer is available through leading manufacturers and suppliers of x-ray equipment.

Dean Saville Selected As Public Health Council Member

Thorndike Saville, dean of the College of Engineering, New York University, has been recently selected by Governor Thomas E. Dewey as a member of the Public Health Council of New York State to fill the vacancy created by the death of Professor Henry N. Ogden.

It was reported in *Health News* that Dean Saville has a broad knowledge of sanitary engineering and environmental sanitation as applied to public health work. He served in the United States Army from 1917 to 1919 with the rank of First Lieutenant. In that capacity he was in charge of construction and partial design of iron distribution mains, sanitary and storm water systems, and subsoil drainage of the flying field at Langley Field, Va. He also made field and laboratory studies on shellfish pollution and tidal phenomena.

Dean Saville was the man responsible for the complete design and partial construction of the Big Bethel Water Supply and Filtration Plant at Langley Field and Fort Monroe, and in 1919 he went to England and France as Sheldon Traveling Fellow to investigate river regulation and sewage treatment processes. In the same year he was appointed associate professor and professor of hydraulic and sanitary engineering, University of North Carolina. He retained this office until 1932.

During the previous period in his life, the Dean was chief engineer of the North Carolina Geological Survey and its successor, the North Carolina Department of Conservation, in charge of water resources and the engineering division.

Macy's Medical Staff Grows in Proportion to Number of Store's Employes

As currently reported in *Health On The Job,* Macy's, New York Department Store, today has a medical staff of approximately 54 persons, with five doctors on continuous duty to care for 12,000 regular employes. This is the outgrowth of a medical program inaugurated in 1885 which paid its first medical advisor the great sum of $50,000 annually.

This program which began 63 years ago when its employes formed the Mutual Aid Association, hired a Dr. McCracken as its advisor although he was also Superintendent of Delivery for the store, a fact which even Dr. Michael Lake, the present medical director, is unable to explain.

Records of the association also show that it amply provided for "two ladies and two gentlemen, who shall visit disabled persons unless the disease is contagious."

At the present time, the medical department fullfills the medical needs of approximately 300 employes and 11 customers a day, but acts only in an advisory capacity to the Mutual Aid Association, from which it was divorced in 1945.

The department now is a part of the Personnel Branch, with which it works closely in watching the health of a working force that sometimes totals 20,000 persons.

Indicative of the close cooperation maintained with the Personnel Branch are the various home visiting services, with visits by nurses if prescribed by a social service worker. Thus, home environment factors undergo investigation insofar as they might affect individual worker health.

The medical department sponsors a continuous educational program through company publications, bulletin boards and pamphlets, to assure maximum attention to its growing activities.

A recent nutrition exhibit attracted widespread attention throughout the store, which clearly illustrates the employe's awareness of present day health hazards.

Dr. Lake revealed in this current interview that two wheel chairs are maintained on each floor at all times for emergency use.

He said, "In 1945 we took care of 3,000 such emergencies, including many heart cases. Respiratory diseases continue to be the major cause for sick absenteeism among employes."

Mobile Phone Units Installed In Nurses' Cars

The Bell Telephone Co., Montreal, Canada, has just established the company ruling that cars used by their traveling nurses be equipped with mobile telephone sets. The same system is now in effect in their Toronto office.

As a result, nurses can be reached in their cars by telephone at any time should the office wish to route them to some special destination, and at the same time they are able to call ahead to their next assignment, thus saving time and effort.

Disclosure of the unique arrangement came recently in an address by J. M. Brace, vice-president of the company at the 27th annual meeting of the Health League of Canada, Industrial Health (Canada) reports. He also disclosed that the company maintained well-equipped medical centers at London, Toronto, Ottawa, and Montreal, with others planned for Hamilton and Quebec City.

Mr. Brace revealed that approximately 65 percent of their employes are located in those cities, and at the present time a medical staff of 10 physicians—three full-time—seven part-time—and 19 qualified nurses cover the medical centers.

He added that during the current year monies disbursed to the company's employes to cover salaries and wages paid during sickness absenteeism will be in the neighborhood of $40 per employe. During the same period, the cost of operating the company's medical department, together with fees paid to medical examiners, will represent an estimated $5.00 per employe.

* * *

Syringomyelia is known as *Morvan's disease,* after Augustin Marie Morvan, (born in France 1819, died 1897), whose extended memoire was published in 1883.

"INTERPINES"
GOSHEN, N. Y.
Phone 117

ETHICAL—RELIABLE—SCIENTIFIC

Disorders of the Nervous System

BEAUTIFUL—QUIET—HOMELIKE—WRITE FOR BOOKLET

Frederick W. Seward, M.D., Director Frederick W. Seward, M.D., Resident Physician Clarence A. Potter, M.D., Resident Physician

You can depend on Hepvisc to reduce readings to safer levels, as well as to bring your patients gratifying relief from the subjective symptoms.

When Blood Pressure Soars to Dangerous Heights

AVERAGE BLOOD PRESSURE BY AGE* (Auscultatory Method)

AGE	Under 18	18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62	63 +
SYSTOLIC Male	117.0	120.2	121.2	121.8	122.9	124.3	126.0	128.1	130.3	131.9	134.2
Female	114.7	116.4	117.7	118.7	120.4	123.6	127.1	129.8	132.5	133.7	135.4
DIASTOLIC **Male	76.4	78.1	78.8	79.5	80.4	81.4	82.3	83.3	84.3	84.5	84.0
Female	75.8	77.1	78.0	78.6	79.9	81.9	83.9	85.4	86.8	86.8	84.4

**Fourth phase

*Blood Pressure. Report of Joint Committee on Mortality of The Association of Life Insurance Medical Directors and The Actuarial Society of America. New York, 1925. pp. 10, 52.

HEPVISC REG. U. S. PAT. OFF.

Hexanitrate of Mannitol + Viscum Album

Available in Bottles of 50-500-1000 tablets.

Complete Literature and Professional Samples Sent upon Request

ANGLO-FRENCH LABORATORIES, Inc.

75 Varick St., New York 13, N. Y.

CRYSTALLINE PENICILLIN SODIUM

Heyden

STABLE - -
Three-year expiration date

Requires no refrigeration*

CONVENIENT
May be carried about safely in physicians bag

FINE HEYDEN CHEMICALS

*Penicillin in solution must be used immediately, or stored in refrigerator.

HEYDEN CHEMICAL CORPORATION
393 Seventh Avenue — New York 1, N. Y.
CHICAGO OFFICE, 20 North Wacker Drive
PHILADELPHIA OFFICE, 1700 Walnut Street